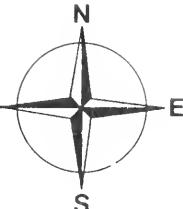


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COSTS IN TECHNICAL PROCESSING AND INTERLIBRARY LOAN--
DATA PROCESSING USER'S MANUAL

PLEASE PRINT

by

Anita L. McHugh

November 1976



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ABSTRACT

The following manual is a guide to the general user of programs developed for the analysis of cost and volume data collected in a survey of technical processing and interlibrary loan, within the seventeen western states and British Columbia. Programs and analysis were developed in conjunction with ten data collection instruments, and are specifically intended for use with these instruments. The programs which are documented in this manual are written in standard ANS Fortran, with the single exception of a Tab output format employed in the generation of tables. This system was developed in an IBM remote job entry environment employing an IBM 360/195. The manual details data preparation, call statements from the main program to subroutines, input/output formats, and the generated tables. Program listings for indepth cost analysis employed in twelve case studies are included. Due to the length of subroutines (3000 statements) used in the general survey of costs in 76 libraries these programs are not included in this report. Information on the availability of these programs may be obtained from WICHE publications unit.

COSTS IN TECHNICAL PROCESSING
AND INTERLIBRARY LOAN--
DATA PROCESSING USER'S MANUAL

COST AND FUNDING STUDIES OF THE PROPOSED
WESTERN INTERSTATE BIBLIOGRAPHIC NETWORK

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U. S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education
Office of Libraries and Learning Resources

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COSTS IN TECHNICAL PROCESSING AND INTERLIBRARY LOAN--
DATA PROCESSING USER'S MANUAL

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INTRODUCTION

1.1 Cost and Funding Studies of the Proposed Western Interstate Bibliographic Network

The Western Interstate Library Coordinating Organization (WILCO) of the Western Interstate Commission for Higher Education (WICHE) conducted cost and funding studies supportive of the related investigations into the development and implementation of western interstate bibliographic network capabilities. These studies were funded through the U.S. Office of Education under Grant No. G00 7500741 and were additionally supported by the ten member states of WILCO. As a part of these studies, three separate examinations were conducted into the costs of technical processing and interlibrary loan, and the interlibrary loan traffic throughout the west. These studies are:

- a. Survey of Costs in Technical Processing and Interlibrary Loan.
- b. Case Studies of Costs in Technical Processing and Interlibrary Loan.
- c. Survey of Interlibrary Loan Traffic in the Western States.

Studies were conducted concurrently in seventy-six libraries in seventeen western states and British Columbia. Academic, public and state libraries were represented. The purposes of these studies were to determine representative costs of library services in areas of potential network support, and to determine the current patterns of interlibrary loan traffic throughout the West. In addition, the cost and funding studies explored the potential impact of network services upon library costs, and the economic issues and implications of networking. The reader is directed to the list of publications in Appendix A for a complete account of the available documentation on these surveys and other products of the cost and funding studies.

This User's Manual represents the documentation of programs and use of the system of programs designed by WILCO for the analysis of data collected in the two surveys and the case studies.

1.2 Purposes of the Manual

The User's Manual is designed to assist the general public in using the programs developed for analysis of data collected in both surveys and the case studies. These programs were developed to manipulate data from questionnaires designed for the survey of costs and activity sheets used in a three-week data collection in twelve libraries -- public, academic and state. Because of the nature of surveys, it is believed that the programs and related questionnaires will be of selective research use. However, the case study data collection in three major areas of technical services -- acquisitions, cataloging, and serials -- and in interlibrary loan can be of great assistance to the library community

in assessing local costs and staffing patterns within department of a single library or for comparative studies in several libraries. For this reason, the thrust of this manual is upon the analysis of cost data within case studies. However, we have also made available to the reader specifications for call statements and use of survey programs. Due to the length of the survey subprograms (3000 statements), this program listing does not appear in the User's Manual. However, these programs will be made available upon request. For details regarding the procurement of these series of subprograms, the reader is directed to the availability statement in Appendix A.

The programs used in the analysis of the Interlibrary Loan Survey are available through the OSIRIS III (an integrated collection of computer programs for the management and analysis of social science data) of the University of Michigan. Because these programs are copyrighted, we are not able to document them in this manual. An explanation of use, description of tables, and data preparation are given here, only.

1.3 The Development of the System

This system was developed in FORTRAN IV in an IBM RJE (remote job entry) environment connected to an IBM 360/195. All input is the standard 37 character set (26 letters of the alphabet, ten numerical digits, and the decimal point). With a single format exception, the programs are written in ANSI (American National Standard) FORTRAN. Output tables are based on the availability of 132 characters per line, and many of the tables use all 132 characters. Unless this line length is available, the user will find that many of the output tables will overflow and, thus, not produce results. The one format exception mentioned earlier is the use of the T (Tab) output format used to align table print outs. This is used to tab the carriage (as with a typewriter) to the desired column in which printing a line should begin. Most systems allow for the T format, and this format should not disturb the use of the programs. The user should note that each computer system has a unique JCL (job control language) and must make adaptations appropriate to the local system. In addition, the system of programs is unique to the IBM RJE environment, and must be adapted to the user's environment, as necessary. These adjustments and limitations should be discussed with a qualified programmer familiar with the computer system which the user intends to employ.

1.4 Limits of the System

The accuracy of the data and the use of the final results are at the discretion of the user. WILCO/WICHE cannot guarantee this product beyond its accuracy at the time this manual was published, and for the data on which it was initially used. The reader is reminded that these programs were developed in an IBM RJE environment, and that all JCL included in the programs are unique to the particular IBM 360/195 employed by this project.

1.5 Instruments Used in this Survey

This guide is based upon the use of ten instruments, used by WILCO during the course of these studies. They are:

FOR THE SURVEY OF COSTS IN TECHNICAL PROCESSING AND INTERLIBRARY LOAN

Form No. 2: Survey of Costs in Technical Processing and Interlibrary Loan. This form is designed to gather gross costing data within acquisitions, cataloging, serials, materials finishing and interlibrary loan. In addition, certain aspects of staffing patterns, processing support, and interlibrary loan patterns are examined.

FOR CASE STUDIES IN COSTS IN TECHNICAL PROCESSING AND INTERLIBRARY LOAN:

Form No. 3: In-Depth Case Study of Costs in Technical Processing and Interlibrary Loan. This form is an expansion of Form No. 2, above, which captures additional costing components such as facility and administrative overhead, as well as costing information necessary for the three-week data collection in technical processing and interlibrary loan to be performed during the study.

Form No. 4: Acquisitions Activity Sheet. This form is a log sheet to be maintained by each staff member performing acquisitions tasks. Kept on a daily basis, this form monitors the time spent and volume processed in 34 activities.

Form No. 5: Cataloging Activity Sheet. This is a log sheet to be kept by each staff member associated with cataloging. Maintained on a daily basis, this form monitors 22 specific activities.

Form No. 6: Serials Activity Sheet. This form is also a log sheet maintained by staff members associated with serials processing. Maintained on a daily basis, 18 specific tasks are monitored for staff time and volume processed.

Form No. 7: Interlibrary Loan Activity Sheet. This log sheet is to be kept by staff members associated with interlibrary loan. This form monitors 25 specific activities in borrowing and lending functions of ILL.

FOR THE SURVEY OF INTERLIBRARY LOAN TRAFFIC:

Form No. 8: Interlibrary Loan Borrowing Transaction Form. This is a single-page tracking document to monitor lag time, type of request, queried institution, and disposition of the request for a sample of transactions received by patrons for materials owned by another library.

Form No. 9: Interlibrary Loan Lending Transaction Form. A one-page tracking document, this monitors lag time, type of request, requesting institution, and disposition of request for a sample of transactions received from another library for materials believed to be owned by the case study library.

The user should have these instruments at hand while examining this manual. It is imperative that the format of the questionnaires be maintained for appropriate use of the programs. Certain flexibility for local modification exists in the design of the activity sheets which is detailed in following sections.

GUIDELINES TO THE USE OF THIS MANUAL

2.1 The Structure of the Manual

The manual is separated into four sections:

- General data preparation: A general guide to the user on formatting, and keypunching instructions.
- The Case Studies of Technical Processing and Interlibrary Loan: A guide to the manipulation of data from the Form #3, In-Depth Case Study in Costs in Technical Processing and Interlibrary Loan for use in specific analysis of the Activity Sheets (Forms #4 through #7), data preparation instructions, and the call statements in the main program necessary for the use of the FACT subroutine, with a description of the tables generated.
- The Survey of Costs in Technical Processing and Interlibrary Loan: An instructional guide on specific data preparation instructions for the background instruments (Forms #2 and #3), subroutine calling specifications, and a description of the tables generated.
- The Interlibrary Loan Survey: A brief description of the survey instruments, Forms #8 and #9, which were used to monitor both borrowing and lending transactions during a three-week period in 64 libraries, and a discussion of the OSIRIS packages employed and output tables generated.

The serious user should study the general data preparation instructions before using the appropriate sections of this guide relevant to his/her study.

2.2 Case Study Analysis -- the Use of Activity Sheets

The activity sheets, Forms #4 through #7, are designed for the individual cost analysis of a single library. The purpose of the form is to discern:

- Staffing characteristics of individual tasks, and functional areas (i.e., cataloging, serials, acquisitions, and interlibrary loan).
- Total direct costs and unit direct labor costs by task.
- Percentages of tasks and task costs by staff type (i.e., professional librarian, other professional, clerical, library assistants, students, other, and staff paid by other than the library).
- Allocation of departmental overhead across tasks, according to staff time.

The forms themselves may be expanded or redesigned to meet the special needs of the local library, or group of libraries under consideration. The only limits set upon such adjustment is that the expansion of any single form should not extend past fifty distinct activities. Additionally, the analyst should maintain rigorous control over the activities and conformity to the definition of activities, and the units of count employed by participating staff members. Output tables for any single functional area consist of:

- Table I: Time Profile: A table indicating the number of minutes spent on each task by category of employee, the total time spent in the task by type of employee, and the percent of the total employee-type time spent in this task.
- Table II: Task Time Profile: A table indicating the total task time spent by all categories of employees, the percentage of that total task time by category of employee, the volume reported (if applicable) and the resulting unit time.
- Table III: Cost Profile: A table indicating the direct salary (salaries plus fringe benefits) costs by task and employee group, the total direct salary cost, the administrative task cost (which represents the administration department budget disbursed over the total library full-time equivalencies reported), the volume reported, and the resulting direct labor unit cost, administrative overhead unit cost and the total labor cost (direct labor plus administrative overhead).
- Table IV: Profile of Total Task Cost: A table indicating the direct labor task cost, the administrative department overhead, the unassigned, administrative, or supervisory cost overhead, as observed during data collection, and the resulting total labor costs (including prorated cost of nonprocessing related costs and administration), and a percentage of total costs created by the supervisory or unassignable overhead and by staff category.

Obviously, then, the analysis can be expanded to other functional areas beyond technical services or interlibrary loan. The flexibility inherent in the forms and the output tables allow the user freedom in directing the analysis into other areas of library service, or in refining the activities presently employed on the forms. Application of these forms can be made upon the following types of problems within the library:

- Analysis of task costs and staff time spent in either a few tasks or an entire library.
- Examination of tasks expected to change with the introduction of new services, as comparative data for similar examination after the introduction of a new service.
- Analysis of staffing in areas of library service.

The adaptation to local situations allows the analyst to use the programs to assess local costs, staffing, etc. in any area and to any degree needed to meet the local situation. During the studies of individual libraries for this project, a three-week interval was selected for examination. The length of time is, of course, a local option. In situations where the throughput or staffing requirements fluctuate greatly over a period of time, it is recommended that data collection extend either over a longer period of time, or during several intervals at different times throughout the year, or at intervals over wide ranges of time (e.g. several days a week over a two-month period). Similarly, if throughput and staffing are stable, the need to collect data over a three-week period is diminished. However, the analyst should be aware that it is often helpful to those collecting data to have a training period for trial of the forms. This enables staff members to adjust to the definitions of tasks and methods of data collection.

The reader is directed to Section 4 for a full account of the programs used in the case studies of costs in technical services and interlibrary loan.

2.3 Survey of Costs -- Use and Analysis

As mentioned earlier, the survey format described in section 5, Analysis of Survey Data, may not be of general use to the user unless a similar survey is conducted. The purposes of the survey were to detect average expenditures and ranges across several functions and across a broad range of libraries. The survey is based upon a random sample stratified into type and size of libraries. Our survey employed the following strata:

Academic Libraries

Large (over 960,000 volumes in holdings)
Other (less than 960,000 volumes in holdings)

Public Libraries

Large (over 820,000 volumes)
Regional (less than 820,000 volumes and serving a group
of independent libraries within two or more counties)
Other (less than 820,000 volumes)

State Libraries

These six strata comprise the groupings into which survey results were presented. Programs used in analysis of the survey data were designed to handle thirty libraries in each stratum, for a total of 180 libraries. The user of the survey programs may find the strata designations inappropriate to the needs of data analysis he/she wishes to perform. However, these designations may be useful as a segregation of data, or for instance, where survey participants exceed thirty libraries (the maximum limit of libraries which can be handled in analysis of a single stratum). Also, the reader should be aware that headings employed in the tables reflect the classification of strata used in this survey. (i.e., Large Academic Libraries, Other Academic Libraries, Large Public Libraries, etc.). Format and print statements would necessarily have to be adjusted by the user if strata titles were inappropriate for his/her needs. The reader is advised that these strata definitions are also used to encode certain data from the questionnaire. In encoding data for the interlibrary loan section of both questionnaires, Form #2 and Form #3, major lender and borrower information (the final page of the questionnaire) was encoded to reflect whether these libraries were large academic, other academic, large public, regionals, other publics or state libraries. These designations conform to the definitions used for the strata.

A description of the tables and sample tables appear in appendix E. There are 32 tables generated from the cost survey program. As mentioned earlier, the subprograms represent about 3000 statements. For this reason, only call statements, data preparation and output tables can be included here. Appendix A includes an availability statement of the full program including subroutines.

2.4 Interlibrary Loan Survey

The purpose of the interlibrary loan survey was to determine the traffic and characteristics of borrowing and lending transactions throughout the western states. The use of the OSIRIS programs allowed for univariate and bivariate analysis of the data. The programs are especially useful in discerning the types of materials most often requested and lent. For the individual library, it can be a valuable

tool in monitoring the usefulness of a bibliographic center, in monitoring lag times through certain lending institutions, and as a guide to possible areas of collection development. For several libraries, it can assist in the assessment of regional interlibrary loan services and networking, as well as monitoring the level of self-sufficiency within the region. The interlibrary loan forms are a part of the public domain, and can be used by any individual interested in studying interlibrary loan traffic. The programs used, however, are copyrighted by the University of Michigan and we are not privileged to make these available to the reader. However, both the OSIRIS programs which we used in our analysis and the canned packages of others, such as SPSS, are available through a variety of sources which the reader may wish to investigate.

Our survey of interlibrary loan was based upon equal interval sampling dependent upon the expected interlibrary loan volume. During a three-week period borrowing or lending requests were tagged for inclusion in the sample at intervals of one, three, five, ten or twenty (depending upon the interval established for the participating library). During analysis, these observations (i.e., completed forms) were weighted according to the interval employed (e.g., if every third request were tagged, the weight by which these observations were multiplied was 3).

GENERAL DATA PREPARATION INSTRUCTIONS

3.1 Introduction

All ten forms described in Section 1.5 of this manual have been coded to allow most data to be punched directly from the form. This eliminates the need for recoding or encoding all data from the book or sheet to a coding form of some variety. Due to the complicated nature of the two background instruments (forms #2 and 3), some coding is necessary, and these necessary adaptations to the form are explained in following sections of this Manual.

The user should keep in mind that bad data input to any mathematical computation is compounded during that computation, and thus the user should endeavor to maintain a reasonable level of accuracy. Appendix D contains selected samples of correctly punched data from all the ten instruments.

3.2 The Character Set

For all ten forms, the character set includes the following:

- *the numbers 0 through 9
- *the decimal point ". "
- *the alphabetic characters A through Z
- *the minus sign, "-"

There are no other characters used; no parentheses, no percent signs, no dollar signs, no commas. The minus sign is used only as a flag in two special circumstances, described in 4.3.

3.3 Card and Column Numbers

The user will, in looking over the data collection instruments, have noticed that there are numbers in parentheses, such as (C1) and (C57) and (38), (14, 15) and (21 -30) appearing in the right margin of the background forms and under page/column headings in both the background forms and the activity sheets. These numbers are generally smaller in size than the characters in the body of the form. Numbers preceded by "C", and enclosed in parentheses, are found only in the two background forms; these refer to the card number, and range from 1 to 77. The numerical entries in parentheses, e.g., (14,15), are found on all forms and are used to denote the column numbers of an 80 column punched card in which these data are to be punched. These numbers, between 11 and 80, may be for a single column, e.g. (36), or (16,17), to indicate two columns, or (31-40) to indicate all columns between, and including, 31 and 40. These column numbers are normally marked (or printed) on the face of computer punch cards. Again, the user is reminded that there are some adjustments to the background instruments (Forms #2 and 3) that must be made before the instrument is

ready to be keypunched. Where adjustments are necessary, these changes will be noted in the following sections of this manual. For specific instructions concerning the activity sheets, see Section 4; for the cost survey, see Section 5; and, for the interlibrary loan survey, see Section 6.

3.4 Placement of Numeric Data

All numeric data are to be right justified in the field specified for it. That is, if the field length is 5, e.g., (15-19), the number 134 must be entered as $\$ \$ 134$ where $\$$ indicates a blank. In this case, the number entered as $\$ 134 \$$ would be read by the computer as 1340. In general, the right most digit must be in the right most columns of the allocated field (i.e., column designated for the entry).

3.5 Special Questions

There are two types of questions that do not require numeric data within the questionnaire, but must be encoded (assigned a numerical coding) for input requirements: (1) those that are to be answered with a yes or a no and (2) those where the user/librarian is required to check statements which are true or describe his/her situation. For those that require a yes/no answer (e.g., "Do you like your hot fudge sundaes with a cherry on top? yes____, no____"), the response is coded and then punched as follows:

| <u>Code</u> | <u>Response</u> |
|-------------|---|
| 1 | yes or positive response |
| 2 | no or negative response |
| 3 | sometimes, maybe, only on Sundays, i.e., a qualified response |
| 0 | blank or no response at all |

The following example illustrates the coding the second type of question, i.e. those that require checking a true statement:

Please indicate below those qualities that apply to you.

- | | |
|------------------|-----|
| I am charming | () |
| I am witty | () |
| I am beautiful | () |
| I am handsome | () |
| All of the above | () |

The user should code these responses as follows:

- | | |
|---|-----------------------------|
| 1 | for those items checked |
| 0 | for those items left blank. |

3.6 Reserved Columns

On all ten forms, the first ten columns of input punched cards are reserved for either data, card, form, or page identification. Some columns are for the user who might wish to review (or verify) the data; other information in these columns is necessary for the computer to search and verify that the system has the correct card of data for processing; and, of course, some information is explanatory of identification for both the user and the system.

The identification columns common to all forms and all cards are as follows:

| <u>Col #</u> | <u>Explanation</u> |
|--------------|--|
| 1 | Form # (2,3,4,5,6,7,8,9) |
| 2-6 | used differently for different forms (refer to section 4 for activity sheets, section 5 for cost survey, and section 6 for the interlibrary loan survey) |
| 7,8,9 | library number (this cannot be zero) as described below |
| 10 | unique for different types of forms (refer to specific sections following) |

The library number, placed in reserved columns 7-9, cannot be zero. The user may use a "dummy" number, or employ the number to indicate stratification and identification when analyzing data from several libraries. For our use of the library number as identification, the reader is directed to section 5.

ANALYSIS OF THE ACTIVITY SHEETS: THE FACT SUBROUTINE

4.1 Introduction

This section describes the generation of the time and cost profiles (activity sheet summaries, Tables I through IV) exhibited in Appendix F. The information required for these analyses is derived from staff lists (pages 7 through 12) of the case study background instrument and the set of activity sheets (form numbers 4, 5, 6, and 7). In addition, the generation of employee hourly cost lists is discussed. Sample hourly cost lists cannot be reproduced in this report due to the confidential nature of the information.

The subroutine used to produce time and cost profile tables is called FACT. It has been designed as an all purpose unit capable of analyzing any set of not more than 50 unique tasks, performed by a set of not more than 50 distinct staff members. Although, for the purposes of this study, the subroutine was employed to analyze data gathered in acquisitions, cataloging, serials, and interlibrary loan, the subroutine can also be used for analysis of reference, circulation, or any functional area within the library, within the limits stated above.

In addition, one task can be allocated for administrative tasks, breaks, lost time, peer consultation, and so forth. We employed this task designation in all areas, for example, task number 31 on the acquisitions activity sheet (form #4). If the user is designing his/her own activity list, it may be beneficial to include such a task. The system will distribute the total cost of this task to all other tasks under consideration in the Summary Table IV. This is optional, and may be omitted with no adverse effect on the running of the subroutine. The subroutine FACT is listed in Appendix H. The following subsections are intended to instruct the user in the preparation of input, the requirements of the main program and call statements, and the specifications of the deck set-up.

4.2 Data Required for the Subroutine FACT

There are three groups of input data required for the use of the FACT subroutine. They are (in order of input):

- the paid days off, fringe benefits, and sabbaticals (pages 11 and 12 of form #3)
- the staff list (not to exceed 50 employees for any functional area, e.g., cataloging), formatted as Form #3 page 10 if the user is using his/her own list of tasks and staff; otherwise from pages 7-10 of form #3.
- the set of activity sheet tasks (not more than 50 separate tasks) including a header/description card for the set of activity sheets.

All data are punched on 80 column cards and read into the subroutine from those cards. As explained in Section 3, the general data preparation instructions, the first 10 columns are reserved for identification for both the user and the computer system. As a reminder, column 1 is for the form #, columns 7, 8 and 9 are for the library number which will be printed on all output and must not be zero. All data placed in numeric fields must be right justified.

4.3 Calculation of Fringe Benefits.

Fringe benefits are considered to be any benefit which a library employee receives from the library or parent organization for which he or she does not pay. These benefits include vacation, sick leave, and sabbaticals.

This information has been requested on pages 11 and 12 of form #3, the background information for the case study libraries. The following section explains how this information must be prepared for input to the FACT subroutine. See Table 4-1.

Table 4-1. Preparation of Card Numbers 1-4: Paid Days-Off and Fringe Benefits.

| <u>Col #</u> | <u>Explanation</u> |
|--------------|--|
| 1 | form # (in this case 3) |
| 2,3 | page number from which the information is punched (in this case, 11) |
| 4,5 | blank |
| 6 | card number (1, 2, 3 or 4) |
| 7, 8, 9 | library number |
| 10 | blank |
| 11-15 | information pertaining to professional librarians, classification a |
| 16-20 | information pertaining to other professionals, classification b |
| 21-25 | information pertaining to library assistants, classification c |
| 26-30 | information pertaining to library clerks, classification d |
| 31-35 | information pertaining to student assistants or pages, classification e |
| 36-40 | information pertaining to other types of library employee, classification f |
| 41-45 | information pertaining to staff members paid by out-of-library sources, classification g |

Fringe benefit data is punched on cards numbered 1 to 5 in the following order:

- Card #1: paid holidays (page 11, lines 8 through 25, item a)
- Card #2: paid sick leave (page 11, lines 8 through 25, item b)
- Card #3: paid vacation (page 11, lines 8 through 25, item c)
- Card #4: fringe benefit rates which are calculated as the percentage of the employee's salary or wages to cover insurance, retirement, etc. (page 11, lines 1 through 7, item c, the total column)
- Card #5: sabbatical (page 12, items 26 through 29)

These cards are essential. If this information is not available for cards #1 through #4, these cards may be left blank, and the system will assume zeros for all necessary information. For the benefit of the user, it is recommended that the card number be entered on blank cards to guarantee the correct order of input. Card #5, however, requires additional information as explained in Table 4.3, Example 5 below, and cannot be left blank. All these cards, even if blank, must be included in the input deck to maintain the necessary data stream. The following are examples to demonstrate the manner in which the necessary information is punched.

Example 1. Card #1, Paid Holidays (from page 11, form #3).

If paid holidays (e.g., Christmas, Thanksgiving, etc.) total eleven days for all employees, Card #1 would look like the following example for library number 900.

| | | | |
|-----|--------|--|-----------------------------------|
| 311 | bb1900 | bbbbbb11bb11bb11bb11bb11bb11bb11bb11bb11bb11 | (the remaining columns are blank) |
|-----|--------|--|-----------------------------------|

Example 2. Card #2, Sick Leave (page 11, Form #3).

For example, all paid employees, except student assistants, receive ten paid days of sick leave annually. This card would appear as follows for library 900.

| | | | |
|-----|--------|--|-----------------------------------|
| 311 | bb2900 | bbbb10bb10bb10bb10bb10bb10bb10bb10bb10 | (the remaining columns are blank) |
|-----|--------|--|-----------------------------------|

Example 3. Card #3, Paid Vacation (page 11, Form #3).

In this case, student assistants in library number 900 receive no paid vacation. Paid vacation for professionals (librarians and others) is equivalent to 22 days annually. Other employees receive ten days of vacation annually, during the first ten years of employment by the library; fifteen days after eleven years of employment and up to twenty years of employment; and, after twenty years of employment by the library, employees receive twenty days. Incremental vacation is punched as follows for this case:

31139002222-5-500-5-5 (the remaining columns are blank)

/ 3113900101020152520 (the remaining columns are blank)

The "-5" in fields allocated for the library assistant (columns 14-15), clerk (columns 19-20), other type of employee (columns 29-30), and staff paid by outside sources information (columns 24-25) are flags to the program to prepare for additional cards on incremental vacation for these types of employee. For each flag indicated on card #3, there would be an additional card of the second type immediately following card #3 indicating the days of annual vacation granted and the upper limit of years employed for which this amount of vacation is given. Cards of the second type must be punched to include three increments. That is, if only two increments are granted over employment, the second increment should be repeated in columns 31 through 40. Nor does the system allow for more than three increments. There must be one card of this second type for each employee classification for which the -5 flag has been entered in the first card. These cards must be in order of classification. That is, the card indicating incremental vacation for library assistants would precede that for clerks, which would precede the card for other employees, and so forth. The information on this second card type beyond the first 10 identification columns is indicated in Table 4-2. The subroutine also allows for similar increments in sick leave. The minus flag for incremental sick leave is -3. This would be punched exactly as indicated in this example for the -5 flag. The format of the second type of card is the same, and there must be a card of the second type for each classification field for which the minus flag is entered in card 1.

The user should be aware of the fact that incremental sick leave and/or vacation may apply to all, and vary with, classifications of employee. If the library has no incremental vacation or sick leave plan (i.e., if all employees receive the same number of days of paid vacation or sick leave regardless of the number of years employed by the library), these annual data are punched in the same format as the paid sick leave and number of paid holidays cards in examples #1 and #2.

Example 4. Card #4, Fringe Benefit Rate (page 11, Form #3).

In this example, library number 900 provides an average of 13% of salary for fringe benefits to all employees, except student assistants who receive 6% of salary in fringe benefits. This would be punched as follows:

/ 31249001313131361313 (the remaining columns are blank)

Table 4-2. Specifications for Cards on Incremental Sick Leave or Vacation.

| <u>Col #</u> | <u>Explanation</u> |
|--------------|---|
| 11-15 | upper limit of years employed by library to qualify for the first increment of paid vacation (or sick leave) |
| 16-20 | first increment of paid vacation (or sick leave) |
| 21-25 | upper limit of years employed by the library to qualify for the second increment of paid vacation (or sick leave) |
| 26-30 | second increment of paid vacation (or sick leave) |
| 31-35 | final limit on paid vacation (or sick leave) or maximum number of years employed by the library. The system will select the corresponding increment of paid vacation (or sick leave) for all employees employed by the library for more than the upper limit entered into columns 21-25. However, this field must <u>not</u> be zero. |
| 36-40 | final increment of paid vacation, that is, the maximum number of days of paid vacation (or sick leave). |

The final card of fringe benefit information is on sabbatical plans that the library may have. This is requested on page 13 of the background survey instrument. This card may not be all blank. The following table shows the format of the card on sabbaticals.

Table 4-3. Sabbatics

| <u>Col #</u> | <u>Explanation</u> |
|--------------|--|
| 1 | form # (in this case, 3) |
| 2,3 | page number (in this case, 12) |
| 4,5 | blank |
| 6 | card number <u>5</u> |
| 7, 8, 9 | library number |
| 10-14 | blank |
| 15 | response to question 26. If the response is no, a 2 is punched in this column and the rest of the card is left blank. If the response is yes, a 1 is punched in this column, and the other information must be entered as follows. |
| 16-19 | blank |
| 20 | response to question 27, the classification of those employees receiving sabbatical benefits |
| 21-25 | response to question 29, the length of the paid sabbatical in whole months at full pay |
| 26-30 | response to question 28, interval at which a qualified employee becomes eligible for sabbatical in number of whole years. |

The following example displays a correctly punched card #5.

Example 5. Card #5, Sabbatical (From page 12, Form #3).

This example represents library number 900, which allows an eight-month sabbatical to professional librarians every ten years. Card #5 would be punched as follows:

/ 312~~00~~5900~~00~~0001~~00~~0001~~00~~0008~~00~~0010 (remaining columns are blank)

Note that the eight months are calculated at full pay in this example, and that, if the library had given eight months at half pay, a 4 for the number of whole months would have been entered in column 25 to represent sabbatical pay.

4.4 Preparing the Staff Lists for the FACT Subroutine

The staff lists are found on pages 7 through 10 of the background data form for the case studies (Form #3). If the user has provided his/her own set of activity sheets, merely use the format of one of these pages for the staff list. As with all other forms and data, the first 10 columns are reserved for identification useful and necessary to both the user and the computer. The column reservations are as follows:

| <u>Col #</u> | <u>Explanation</u> |
|--------------|-----------------------------------|
| 1 | Form #, in this case a 3 |
| 2,3 | page number, either 7, 8, 9, 10 |
| 4, 5, 6 | blanks |
| 7, 8, 9, | library number, <u>not</u> a zero |
| 10 | blank |

Note that the columns into which the data are punched are the columns (field) specified at the top of the page under the column headings (e.g., (11-15) for employee ID number, (20) for type of employee, (21-30) for annual salary and so forth). There is one column change; under i, the employee's supervisor's identification may take up to 5 columns (i.e., columns 46-50 instead of only the specified columns 49 and 50). All data on salary should be right justified in the appropriate field. The hourly wage may be punched as a real number (e.g., \$2.33 per hour would be punched as $\$2.33$ in columns 31-35). All other information is to be punched as right justified integers. Refer to Appendix B for a definition of right justified. The employee classification (professional librarian, other professional, etc.) should be punched as an integer (1-8) corresponding to the Alpha character (A-H) that is used to designate the grouping. That is, 1 represents A, 2 represents B, etc. The employee's identification and that of his/her supervisor may be punched as Alpha characters. Note that while A B and AB and A.B. may mean the same employee, the computer will read these designations as different employees. After the analyst has designated the employee identification, this identification must be used precisely and consistently for the activity sheets and all other references to that employee. Note that for the purposes of employee identification, the same guideline applies equally to numeric identification (e.g., 001 is not the same as $\$01$).

Examples of correctly punched cards for staff lists follow:

Example 6. Salaried employee working in two departments under study.

An employee, library assistant (category c), with an identification designation of A, is employed in Library number 900, earns \$9000 annually, and works approximately twenty hours per week in acquisitions, and twenty hours per week in cataloging. This employee would have the following two cards punched, where he/she works a full twelve-month year and his/her supervisor has the identification designator, S.

/307~~BBB~~900~~BBBBB~~AB~~BBB~~C~~BBB~~9000~~BBBBB~~2040~~BBBB~~5~~BBB~~\$

/308~~BBB~~900~~BBBBB~~AB~~BBB~~C~~BBB~~9000~~BBBBB~~2040~~BBBB~~5~~BBB~~\$

Note that if this employee had worked twenty hours in acquisitions, and twenty hours in circulation (i.e. an area not being studied), only the first card would have been punched for input.

Example 7. Hourly employee working in one department under study.

In this case, a page earning \$2.67 per hour at library number 900 has the Id., B, and works full time in interlibrary loan. He or she would have one card punched as follows, where his/her supervisor is #T.

/310~~BBB~~900~~BBBBB~~B~~BBB~~E~~BBB~~2.67~~BBB~~4040~~BBBB~~3~~BBB~~\$#T

4.5 Preparing the Activity Sheets for the FACT Subroutine.

An activity sheet is basically a list of tasks numbered from 1 to N (where N is a number less than or equal to 50). Each set of activity task cards (i.e., those cards punched from one set of activity sheets) must have a header card containing the information on the Table 4.4. (The * indicates that this is not optional, and must be included, not blank or zero).

Table 4-4. Description of the Header Card.

| <u>Col #</u> | <u>Explanation</u> |
|--------------|--|
| 1-8 | * eight alphanumeric characters to describe the set of activity sheets, e.g., ACQ for acquisitions. This identifier will be printed on the output tables. |
| 12,13 | * total number of tasks to be listed (not more than 50) |
| 17,18 | the number of the administrative type task, to be distributed over all other tasks (may be omitted) |
| 19-28 | the administrative department budget, the cost of which is also distributed over all other tasks according to the task time (may be omitted) |
| 29-34 | the total library FTE (used for distributing the administrative department costs equitably over all other departments of the library) This may be omitted. |

Example 8. Header Card.

A set of acquisitions activity sheets could have the following header card.

/ACQBBBBBBBBB37BBBB31BBBB15000B22.5 (rest of card blank)

WHERE

ACQ implies acquisitions and the ACQ will be printed as part of the output header

37 is the maximum number of tasks listed in this case, including those tasks listed under "other" by employees

31 is the administrative task number, the cost of which is to be distributed over the other tasks

15000 is the administrative department budget

22.5 is the total library FTE

The activity sheets themselves are easy to prepare. The following table shows the columns and the necessary information for columns 1-10. These are the identification numbers, the remainder are data, and are noted on the form. Cards only need be punched for tasks in which time data has been entered by the employee.

Table 4-5. Description of Activity Sheet Task Cards

| <u>Col #</u> | <u>Explanation</u> |
|--------------|---|
| 1 | form # (either 4, 5, 6, or 7) |
| 2-6 | blank |
| 7, 8, 9 | library number (must <u>not</u> be zero) |
| 10 | blank |
| 11-15 | the employee's identification (<u>must</u> be identical to that used in the employee lists, pages 7 through 10) |
| 19,20 | the task number (which must be less than or equal to 50). The user need only punch cards for those tasks where there is time entered. |
| 21-25 | the time spent on this task in whole minutes |
| 26-30 | the volume processed (e.g., number of cards alphabetized or filed). If no data are supplied, these columns may be blanks. |

The deck of activity task cards must end with a blank card, to signal the end of the deck. There is no order requirement within the deck itself (that is, task cards do not have to follow in sequence of task number or employee number).

4.6 Using the FACT Subroutine

Once data preparation is complete, two program statements within the calling program must be prepared to specify the library number (LIB), and the number of employees in the staff list (NOEMP). Since this is a FORTRAN program, the user is reminded that all statements within the main program and subroutines must begin in column 7. The two cards are equivalence (i.e., "equal") statements. For example, library number 900, with 43 employees, would have the following two cards in the calling program:

```
LIB=900
```

```
NOEMP=43
```

The next card to be prepared is the call to the subroutine FACT. This call statement is:

```
CALL FACT(LIB,NOEMP)
```

And then, as with all FORTRAN programs, a final card is necessary to tell the computer that it has completed the job:

```
END
```

This is followed by the three sets of data (i.e., fringe benefit cards, staff lists, activity task cards) punched according to the specifications indicated in the previous four subsections. Additionally, the user must prepare and arrange the job cards appropriate to his/her installation, and according to correct keypunch specifications. The results of this program, subroutine and input are an employee hourly cost list and those tables I through IV, exhibited in appendix F.

It is possible to run more than one set of activity task cards at a time. Due to the possible multiple requirements of this situation, there are three other entry points (i.e., three other ways to call) the subroutine FACT.

The entry points and their uses and output are as follows:

FACT runs the entire subprogram, using all the information on pages 11 and 12, the staff lists and the activity sheets, producing the list of hourly staff cost and the time and cost profiles.

FACT1 uses only the information on pages 11 and 12 and the staff list to produce only the hourly cost list.

FACT2 after FACT or FACT1 has been run, uses previous information from pages 11 and 12 and a new staff list and a new activity sheet deck to produce both the hourly cost list and the time and cost profiles.

FACT3 after FACT or FACT1 or FACT2 has been run, uses previous information from pages 11 and 12, previous staff list, and a new activity sheet deck to produce a new set of time and cost profiles.

Example 9. Calling Sequence

Library number 800 has a total of 45 employees working in combined acquisitions, cataloging and serial sections, and another 9 in interlibrary loan. So the calling sequence to produce hourly cost list, and time and cost profiles from the activity sheets for all departments, and all employees would be as follows:

LIB = 800

NOEMP = 45

CALL FACT (LIB, NOEMP) (runs the first set of activity sheets, i.e., acquisitions)

CALL FACT3 (LIB,NOEMP) (these last two run the second and third

CALL FACT3 (LIB,NOEMP) set of activity sheets, i.e., cataloging and serials, using the same list of employees)

NOEMP = 9

CALL FACT2 (LIB,NOEMP) (uses new employee list to run the final set of activity sheets, i.e., interlibrary loan)

END

For this example, the data deck would be set up in the following order:

1. cards 1-5 from pages 11 and 12, in order, holidays, sick leave, vacation (including one card for each group of employees that receives incremental sick leave or vacation as in the punching instructions section 4.3), fringe benefits, sabbatical;

2. the employee staff list, including identifications for all the employees completing activity sheets in acquisitions, cataloguing and serials. (The program will stop if it can't match the employee's ID from the activity sheets with one in the staff list.);
3. activity sheet identification card for acquisitions (as described in Section 4.5, Table 4-3);
4. the deck punched from the activity sheets for the acquisitions department (i.e., acquisitions activity sheet deck), as described in Table 4-4;
5. a blank card. This is to signal the end of the activity sheets. (The program then summarizes and writes the time and cost profiles for acquisitions.);
6. activity sheet identifier for cataloguing (as described in Table 4-3.);
7. cataloguing activity sheet deck (as described in Table 4-4.);
8. blank card;
9. serials activity sheet identifier card (as described in Table 4-3.);
10. serials activity sheet deck (as described in Table 4-4.);
11. blank card;
12. the nine employee cards for the interlibrary loan department (as described in section 4.4);
13. interlibrary loan activity sheet identifier (as described in Table 4-3.);
14. interlibrary loan activity sheet deck (as described in Table 4-4.) ; and
15. blank card .

Refer to Appendix H for a listing of the FACT subroutine.
Refer to Appendix G for deck set-up examples for this program.

4.7 Fatal and Non-Fatal Errors

In producing the sets of tables there are three possible fatal errors. The first and second are related to incorrect count of the number of staff list cards. If NOEMP is less than the number of employee cards, the program will stop with no written message. If NOEMP is greater than the number of employee cards, the program will stop in that it has tried to process the activity sheet identifier card

with alpha characters where it expected to see only numerics. The third is the most prevalent and also the most difficult to find, and that is, if the program is unable to match a member of the listed staff with the one that filled out the activity sheet. In this case the program stops with a STOP 55 in the system as a message.

The other error that may be encountered is a blank card or a zero in the activity sheet task time (columns 24,25). This will cause the program to end before the end of the data with no message to that effect.

ANALYSIS OF THE SURVEY DATA

5.1 Introduction

The data analyzed with the system of subroutines described in this section are derived from the two background instruments:

- Form #2, The Survey of Costs in Technical Processing and Interlibrary Loan, and
- Form #3, In-depth Case Studies of Costs in Technical Processing and Interlibrary Loan.

The system of subroutines to produce the output summary tables described and exhibited in Appendix E is accessed or called with a short Fortran program. There is a single control subroutine for each set of tables plus a basic statistics subroutine to provide the weighted mean (average), high and low observations, and the weighted standard deviation. These tables are generated from an array of not more than 30 data points (i.e., observations for a single table element) and their respective weights. Due to the complicated format structure of the instruments themselves, there is a single subroutine to search the data set (the set of all survey data from every library in the survey) stored on tape or disk and retrieve the appropriate card image or images for processing in each of the respective tables. By personal preference, the main control program and each of the control subroutines have associated with them a dictionary of words used in column headings and line labels and associated subroutines to access these dictionaries.

5.2 The Survey Data Set

The survey data set consists of 80 column card images punched or prepared from the survey instruments. These cards are numbered 1 through 77. This data set is written on a tape or disk rather than being used as card input to allow for multiple searches of the data set. The in-depth case study instrument (Form #3) is an expansion of the survey instrument (Form #2) and both Forms #2 and #3 are identically coded for keypunching responses to survey questions in which the information coincides.

The system assumes that the data present on tape or disk are correct; that all cases/libraries contain exactly 77 cards; and that all cards are in numerical order.

5.3 Stratification of Libraries for the Purposes of this Survey

For purposes of this survey, the libraries responding were divided into groups or strata according to size and type, to avoid comparing doughnuts to doughnut holes. The libraries were then numbered

according to the group to which they were assigned. The keypunching format allocates 3 digits or columns to the library number, the first of which was used to distinguish the strata of libraries. The other two columns were unique to each library and used to identify a single library.

For example, library number 308 is different from library number 305, although both belong to the same grouping or stratum. There is no internal checking on size and/or type. The digit designating stratum is there to expedite the searching process, as the tables are generated for only one stratum at a time. All other numbers are ignored during the data set search.

The following table is a list of the codes used for stratum identification. This initial digit also indicates to the computer the appropriate heading that will be used in printing the summary tables:

| <u>Stratum Identification Number</u> | <u>Library Stratum</u> |
|--------------------------------------|---|
| | large academic libraries, holding more than 960,000 volumes |
| 1 | state libraries |
| 2 | large public libraries, holding more than 800,000 volumes |
| 3 | other regional libraries, those public libraries holding less than 800,000 volumes and offering at least one type of regional service to libraries in at least two counties |
| 4 | other academic libraries, those holding less than 960,000 volumes |
| 5 | other public libraries, those public libraries not included in either large public or other regional grouping, and holding more than 3000 volumes. |

In addition to specifying to the computer output headings and strata, these codes were used in encoding types of libraries lending and borrowing from participating libraries (see page 24 of Form #2 and page 34 of Form #3) which are summarized and printed in Tables X-G and X-H, frequency of borrowers and lenders tables. The user can change these definitions to fit his/her own situation, keeping in mind the headings generated and that he/she should be consistent throughout the analysis of the survey data.

5.4 Reserved Columns

For identification of the data contained on the card by both the user and the computer, the first 10 columns have been reserved as follows:

| <u>Col #</u> | <u>Explanation</u> |
|--------------|--|
| 1 | form # (either a 2 or a 3) |
| 2,3 | page number (found in the upper right hand corner of each page, 1 through 26 for Form #2 and 1 through 35 for Form #3) |
| 4,5 | card number (1 through 77, noted with a "(C_)" in the right margin.) Only the digits are punched. Do not include "C". |
| 6 | blank |
| 7,8,9 | library number (with the first column, i.e., column 7, the stratification digit as explained in the previous section) |
| 10 | flag digit for the budget pages (that is, 14 and 15 of the survey Form #2, and 22 and 23 of the case study Form #3), or blank for all other cards. |

5.5 Alterations to the Coded Keypunching Format

The expanded case study Form #3 is coded for keypunching exactly as the survey instrument Form #2. There are exceptions, however. In two sections the case study information does not correspond exactly with the survey information. Conversion requirements for Form #3 are discussed in Section 5.6.

The user should be aware of a problem arising from the processing of survey data, which may occur. There are three potential responses within the questionnaire which may exceed the allocated field length (e.g., the response is 100 and the field length allowed for only two digits). In these, as in any other cases of possible overflow, the user should enter a 9 in each of the columns in the allocated field (e.g., where two columns are allowed, enter 99). The system in these cases notes that true data exceeds the field (i.e., large data) and if possible and applicable corrects by adding the 1 (e.g., 99 becomes 100). These three exceptions to data input are noted in the following table. This table documents necessary changes to the coded keypunching format which appears in Forms #2 and #3.

Table 5-1. Alterations to Coded Keypunching Format

| Page Number Form #2 | Number Form #3 | Explanation (question number, line number, and identification changes to be made, or codes to be employed) |
|------------------------|-------------------|--|
| 1 | 1 | question iii, card 1, columns 29-33 1 for calendar year (columns 30-33 blank). 2 mm nn (29-33) for fiscal year with mm beginning month, nn ending month. For example, fiscal year July 1 to June 30 would be coded 20706. |
| 4 | 5 | estimated title to volume ratio. Data should be placed on (CTI). |
| 4 | 5 | Cols 41-45 estimated titles Cols 46-50 estimated volumes. For example, 2 volumes per title or 1 title per two volumes would be punched as 1 in col 45, and 2 in col 50. |
| 7 | 13 | question I, union catalog or union list. Each positive response (bookstock, periodical, other) is allocated 2 columns. If the item is checked (i.e., a positive response) a 1 should be punched in the first specified column of the field; and in the second column, a 1 if the union catalog is computer produced, or a 2 if not computer produced. |
| 8-11 | 14-17 | cards 28 and 29, staff. Circumstances necessitated complete renumbering of the specified columns (fields) for responses on this page. Refer to Exhibit 5-1 for the renumbered edition. These data from Form #3 (page 13) must be transcribed from more than one page. Refer to section 5.6 on the conversion of case study data to the survey instrument format. |
| 8-11 | 14-17 | cards 30 through 44, support services. This was an area of possible extra large data (i.e., data which overflows the specified field). See introductory paragraphs of section 5.5 for general instructions on the use of the 9 fill in these cases. The system does not correct internally for a 99999 entry in these cases. |
| | | For those items where the function is checked (i.e., support services purchased) but no data on volume or cost is available, the code, -1, in the volume column will indicate a positive response (i.e., checked function). |

| <u>Page Number</u> | <u>Form #2</u> | <u>Form #3</u> | <u>Explanation</u> |
|--------------------|----------------|----------------|---|
| 11 | 17 | | <u>question G, card 44, columns 37-44, support systems.</u> Codes employed are: For in-house development, a 1 should be punched in the appropriate column; for contracted development, a 2 should be punched in the appropriate column. |
| 12 | 18 | | <u>question H, computer systems.</u> The single column indicated after "System name" is a single digit to indicate the system function (i.e., the area of support). The codes employed are: 1 Circulation 2 Acquisitions 3 Interlibrary Loan 4 Serials 5 Inventory Control 6 Cataloging 7 Processing 8 Accounting 9 Other |
| 12 | 18 | | <u>question L, system maintenance.</u> If more than one organization is responsible for system maintenance, use additional columns. That is, note the first organization cited in column 68, the second in column 69, and so on to the end of the card, if necessary. Note that the entry in each column would correspond to the number associated with the organization (i.e., 1 indicates the library, 2 indicates the parent organization, etc.) which maintains the system. |
| 14-15 | 22-23 | | <u>Library Budget.</u> For these two pages, column 10 is used as a flag to indicate library structure. For the first card (48 or 56) of each page, a 1 punched in column 10 indicates that the capital budget includes funds for a new building; a 2 indicates that the figure listed in bookstock budget (or expenditures) is the total materials budget. Column 10 of the operating budget (cards 49 and 57) should be encoded as follows: |

| <u>Page Number</u> | | <u>Explanation</u> |
|--------------------|-----------------|--|
| <u>Form #2</u> | <u>Form #3</u> | |
| 14-15 cont'd | 22-23 cont'd | 1 indicates that the library only has a technical processing department without a separate acquisitions or cataloging department; in general only Administration and Interlibrary Loan can be considered in departmental analyses. 2 indicates that only Administration budget data can be considered relatively accurate; other departmental data are unavailable, or combined (as in technical service departments). |
| 16 | 24 | <u>question D, regional libraries.</u> This is the second place in the questionnaire where there can be a possible data overflow. See general instructions for use of the 9 fill. The system will <u>not</u> correct 99 entries internally. |
| 18 | 26 | <u>question G4, union catalog additions.</u> Change columns from (29-33) to (29-35). |
| 19 | 27 | <u>question G5, union catalog locations.</u> Change columns from (34-35) to (36-45). |
| 20 | 27 | <u>questions H15-H17, stipends for regional service.</u> In the frequent case, where all support (i.e., 100%) is from a single source, enter a 99 in the appropriate columns; the system adds 1% when <u>both</u> 99% and only a single source of support are indicated. |
| 22 | 31 | <u>question F, number of libraries queried.</u> Punch the number (1 through 9) corresponding to the interval checked, (e.g., 4 would be punched if the interval 2.5-2.9 were checked). |
| 24 | 34 | <u>card 77, frequent borrowers and lenders.</u> The column numbers, 71-74, for card 76 are ignored. Instead, a new card is begun for this page. Exhibit 5-2 shows the coding form. Each borrowing or source library is identified with a two-digit code where the first is library type and the second digit indicates the location of the library relative to the location of the respondent (i.e., the library completing the form). The codes are as follows: |

Library Type

- 1 Large Academic Library
- 2 State Library
- 3 Large Public Library
- 4 Other Regional Library
- 5 Other Academic Library
- 6 Other Public Library
- 7 Bibliographic Center
- 8 Special Library (medical, law, etc.)
- 9 Other Library (private, industrial, etc.)

LOCATION (RELATIVE TO THE RESPONDING LIBRARY)

- 1 Local (a location within certain bounds of proximity that the library considers "close-by", based upon turnaround and ease of access, and as specified by the respondent in the interlibrary loan section, question A, page 22 of Form #2, or page 31 of Form #3)
- 2 In-State
- 3 Adjoining State
- 4 Other Western States
- 5 Eastern States (or foreign countries, excluding Canada)

See Exhibit 5-2 for coding format. Refer to section 5.3 for definitions of the types and sizes of libraries.

I. PLEASE INDICATE BELOW THE STAFF BENEFIT RATE (PERCENT OF SALARY) GIVEN TO EMPLOYEES IN EACH OF THE FOLLOWING CATEGORIES:

1. Professional librarian _____ % (11-14)
2. Other professional _____ % (15-18)
3. Library assistant _____ % (19-22)
4. Clerks _____ % (23-26)
5. Student assistant/page _____ % (27-30)
6. Other (excluding staff involved in plant maintenance) _____ % (31-34)

J. PLEASE INDICATE BELOW THE FULL-TIME EQUIVALENCIES (FTE) PRESENTLY EMPLOYED IN YOUR LIBRARY IN THE FOLLOWING FUNCTIONS OR POSITIONS:

1. Business and financial staff (excluding book fund bookkeepers) _____ % (35-38)
2. Book fund bookkeepers _____ % (39-42)
3. Library planning _____ % (43-46)
4. Library fund raising _____ % (47-50)
5. Systems analysts _____ % (51-54)
6. Programmers _____ % (55-58)

K. PLEASE INDICATE THE AVERAGE SALARY INCREASES GIVEN DURING THE FOLLOWING YEARS BY CATEGORIES OF EMPLOYEE. THIS SHOULD REPRESENT THE COMBINED PERCENTAGE INCREASES OF MERIT AND COST-OF-LIVING INCREASES. PROMOTIONAL INCREASES GIVEN TO EMPLOYEES MOVING INTO NEW POSITIONS SHOULD NOT BE INCLUDED.

TYPE OF EMPLOYEE

1. Professional librarian _____ % (11-13)
2. Other professional _____ % (20-22)
3. Library assistants _____ % (29-31)
4. Clerks _____ % (38-40)
5. Student assistant/page _____ % (47-49)
6. Other(excluding staff involved in plant maintenance) _____ % (56-58)

(c28)

(c29)

| M. | 1976 (est.) |
|----|-------------|
| 1. | % (17-19) |
| 2. | % (26-28) |
| 3. | % (35-37) |
| 4. | % (44-46) |
| 5. | % (53-55) |
| 6. | % (52-64) |

| L. | 1975 |
|----|-----------|
| 1. | % (14-16) |
| 2. | % (23-25) |
| 3. | % (32-34) |
| 4. | % (41-43) |
| 5. | % (50-52) |
| 6. | % (59-61) |

| K. | 1974 |
|----|-----------|
| 1. | % (17-19) |
| 2. | % (26-28) |
| 3. | % (35-37) |
| 4. | % (44-46) |
| 5. | % (53-55) |
| 6. | % (52-64) |

Initials _____

XIII. INTERLIBRARY LOAN

EXHIBIT 5-2

W. PLEASE INDICATE BELOW INSTITUTIONS (INCLUDING BIBLIOGRAPHICAL CENTERS) WHICH MOST FREQUENTLY REQUEST MATERIALS FROM YOUR LIBRARY. RANK ACCORDING TO THE NUMBER OF REQUESTS MADE ANNUALLY, IF POSSIBLE. INDICATE THE NUMBER OF REQUESTS RECEIVED BY YOUR LIBRARY FROM THIS LIBRARY OR CENTER DURING THE LAST REPORTING YEAR, IF THIS STATISTIC IS AVAILABLE.

| LIBRARY NAME | LOCATION | NUMBER OF REQUESTS RECEIVED LAST YEAR | (C77) |
|--------------|----------|---------------------------------------|---------|
| 1. | | | (11,12) |
| 2. | | | (13,14) |
| 3. | | | (15,16) |
| 4. | | | (17,18) |
| 5. | | | (19,20) |
| 6. | | | (21,22) |
| 7. | | | (23,24) |
| 8. | | | (25,26) |
| 9. | | | (27,28) |
| 10. | | | (29,30) |

11. WHAT PERCENT OF THE TOTAL REQUESTS RECEIVED BY YOUR LIBRARY FROM OTHER LIBRARIES (AS ENTERED IN QUESTION (J)) DO THE ABOVE REPRESENT? _____ % (31-33)

X. PLEASE INDICATE BELOW THE TEN SOURCES (INCLUDING BIBLIOGRAPHIC CENTERS) FROM WHICH YOU MOST FREQUENTLY BORROW MATERIALS. RANK ACCORDING TO THE NUMBER OF REQUESTS THAT YOUR LIBRARY MAKES ANNUALLY, IF POSSIBLE. INDICATE THE NUMBER OF REQUESTS MADE OF THIS INSTITUTION DURING THE LAST REPORTING YEAR IF THIS STATISTIC IS AVAILABLE.

| LIBRARY NAME | LOCATION | NUMBER OF REQUESTS MADE LAST YEAR | (34,35) |
|--------------|----------|-----------------------------------|---------|
| 1. | | | (36,37) |
| 2. | | | (38,39) |
| 3. | | | (40,41) |
| 4. | | | (42,43) |
| 5. | | | (44,45) |
| 6. | | | (46,47) |
| 7. | | | (48,49) |
| 8. | | | (50,51) |
| 9. | | | (52,53) |
| 10. | | | (54-56) |

11. WHAT PERCENT OF THE TOTAL REQUESTS MADE, AS ENTERED IN QUESTION (C), DO THE ABOVE REPRESENT?

Initials _____

5.6 Case Study Data Conversion

There are two sections of the in-depth case study instrument (Form #3) that are not coded for keypunching in the required survey format. These are the staff lists and associated data, pages 7 through 13, and the equipment and communications costs, pages 19 and 20.

The staff lists can be converted manually with the aid of a calculator to conform data to the summary format of departmental staff (as in Form #2, page 6). The user should note that the total library, administrative department and materials finishing staff summaries are requested on page 13 of Form #3 and are in appropriate format. All the user need summarize are the data from the four pages of staff lists. If more than two or three staff members appear in each section or department, data can be more efficiently summarized with the use of the CON subroutine as listed in the Appendix I. This subroutine converts the staff lists (pages 7 through 10 of Form #3) to the summary output table identical in format to that of Form #2, page 6. (A sample output is reproduced in Appendix I.) The following four statements will access the CON subroutine. (Reminder: FORTRAN program statements begin in column 7):

```

LIB = 900
NOEMP = 43
CALL CON (LIB,NOEMP)
END

```

where LIB is the library number; and, NOEMP is the total number of punched cards for employees listed on pages 7 through 10. Refer to section 4.4 for instructions on keypunching these staff lists. There must be one card for each employee in each department. That is, if an employee spends part of the week in cataloging and part in the acquisitions department, this employee must have two cards for the CON subroutine so that his/her time is entered in both departments. The only input data required for the CON subroutine are cards punched from these staff lists.

Information pertaining to the staff benefit rate (item F, page 11, lines 1 through 6) with items J through M on page 13 must be transcribed into the survey format to fill cards 28 and 29. Refer to section 5.5 and exhibit 5-1 for the format of these cards.

Information pertaining to equipment and communications costs, (pages 19 and 20 of the case study instrument, Form #3) should be transcribed to the survey format of Form #2, for preparation of cards 46 and 47. The annual cost for copying equipment rental, supplies and maintenance in Form #3 (page 20, question C) is equivalent to question A, page 13 of the survey instrument, Form #2, and should be input as such. That is, the annual cost of copying is entered as the first data element

(columns 11-17) on card 46. The annual communications costs are then entered in the remaining columns of cards 46 and 47. The order of the information requested is the same on both instruments. However, Form #3 does not include card and column identifiers for annual cost information. Additional information on communications (i.e., purchase price and date of purchase) in Form #3 should be ignored. The user should compare the questions in Form #3 and Form #2 to verify that he/she has transcribed the information correctly. Exhibit 5-3 is a sample page from the survey instrument (Form #2).

5.7 Subprogram Calling Specifications

The system was written in FORTRAN and access to subroutines is made through a short FORTRAN calling program. The data from the survey instruments are assumed to be on tape or disk, unit 8. In addition to these data, inputs to the calling program are two 5-digit numbers: The first input indicates the stratum from which the user wishes to generate the summary tables, and the second input denotes the number of libraries in that stratum. These two may be input either from the card reader or specified in the calling program. The number of libraries in any one stratum must not exceed 30. The specified calling digits are as follows:

- | | |
|---|--------------------------|
| 1 | Large Academic Libraries |
| 2 | State Libraries |
| 3 | Large Public Libraries |
| 4 | Other Regional Libraries |
| 5 | Other Academic Libraries |
| 6 | Other Public Libraries. |

The user will note that these digits are the coded stratum designator digits (as explained in section 5.3), plus 1.

The user must designate the unit on which the survey data is stored as unit 8 in the job control cards he/she uses. Due to the complicated nature of the system of programs, it is recommended that the user enter all subroutines into a library.

PROCESSING AND REFERENCE SUPPORT (cont.)

EXHIBIT 5-3

- M.M. PLEASE DESCRIBE THE PRIORITY THE LIBRARY HAS IN USING THE SYSTEM(S) DESCRIBED IN QUESTIONS (E) THROUGH (L). IF MORE THAN ONE SYSTEM IS EMPLOYED BY THE LIBRARY, INDICATE EACH SYSTEM SEPARATELY. PRIORITY ON THE SYSTEM IS CONSIDERED TO BE THE PRECEDENCE THE LIBRARY HAS IN USING THE SYSTEM (e.g. third priority after accounting and financial aids, first before any other unit may use the system).

EQUIPMENT, COMMUNICATIONS, AND RELATED SUPPLIES

- A. PLEASE ESTIMATE THE ANNUAL COST EXPECTED DURING THE CURRENT REPORTING YEAR FOR COPYING EQUIPMENT RENTAL, SUPPLIES AND MAINTENANCE USED FOR INTERNAL LIBRARY FUNCTIONS (EXCLUDE COSTS FOR COPYING EQUIPMENT AND SUPPLIES WHICH ARE PATRON REIMBURSED, OR FOR EQUIPMENT FOR PUBLIC USE).

(c46)
(11-17)

- | EASE ESTIMATE THE ANNUAL COSTS EXPECTED DURING THE CURRENT REPORTING YEAR FOR THE FOLLOWING AREAS OF
COMMUNICATIONS AND RELATED EQUIPMENT, SUPPLIES, AND MAINTENANCE COSTS. | |
|--|---|
| 1. TELEX (an automatic teleprinter exchange switching service provided by Western Union) equipment rental, maintenance, supplies and communications charges. | \$ _____ (18-24) |
| 2. TELETYPE EXCHANGE SERVICE, TWX, (an automatic dialed teleprinter exchange switching service provided by Western Union on a commercial toll basis) equipment rental, maintenance, supplies and communication charges. | \$ _____ (25-31) |
| 3. DATATEL or DATEL (data or high-speed telegraph system coordinated with voice connections) equipment rental, maintenance, supplies and communications charges. | \$ _____ (32-38) |
| 4. OTHER TELETYPE SERVICE, equipment rental, maintenance, supplies and communications charges. | \$ _____ (39-45) |
| 5. FAXIMILE (FAX) TRANSMISSION (of pictures, maps, etc.), equipment rental, supplies, maintenance and communications charges. | \$ _____ (46-52) |
| 6. DATAPHONE (data or high speed telephone system), equipment rental, maintenance, supplies and communication charges. | \$ _____ (53-59) |
| 7. CRT (CATHODE RAY TUBE) OR REMOTE ACCESS TERMINAL, equipment rental, supplies, maintenance and communication charges providing interactive access to computer via a television-like screen or line printer and keyboard. | \$ _____ (60-66) |
| 8. LINE CHARGES, LEASED LINES, OTHER MEANS OF COMMUNICATIONS TO AUTOMATED SYSTEMS (COMPUTER) NOT INCLUDED IN ABOVE. | \$ _____ (67-73) |
| 9. TELEPHONE, OTHER THAN ABOVE | \$ _____ (74-80) |
| 10. OTHER COMMUNICATIONS COSTS EXPECTED (SPECIFY) | \$ _____ (c47) (\$11-17) (18-24) (\$25-31) |

In the following two examples IST means the coded stratum designator and NST indicates the number of libraries in the stratum (IST). The potential user should be aware that other statements in these examples are for space allocations, error control and end of job control. These must be included for the job to run correctly.

```
1...5...10....5...20....5...30....5...40....5...50....5...60....5...
    DIMENSION IP(5)
    RFAL*8 D(50)
    COMMON/DICT/D,IP
1  FORMAT (?15)
6  READ(5,1)IST,NST
   IF(IST)4,4,5
5  CALL DCTSRC(IST)
   K=IP(3)
   IF(K.EQ.19) STOP
C INSERT SUBROUTINE CALL STATEMENTS BETWEEN THESE TWO CARDS
```

```
C INSFRPT SURROUNTING CALL STATEMENTS BETWEEN THESE TWO CARDS
    GO TO 6
4  CONTINUE
END
```

Data Cards are:

```
1    10
5    18
```

The data set ends with a blank card.

Or, if you have only one group, the card read can be omitted, as in the following:

```
1...5...10....5...20....5...30....5...40....5...50....5...60....5...
    DIMENSION IP(5)
    RFAL*8 D(50)
    COMMON/DICT/D,IP
C INSERT IST AND NST BETWEEN THESE TWO CARDS
    IST=2
    NST=10
C INSERT IST AND NST BETWEEN THESE TWO CARDS
    CALL DCTSRC(IST)
    K=IP(3)
    IF(K.EQ.19) STOP
C INSERT SUBROUTINE CALL STATEMENTS BETWEEN THESE TWO CARDS

C INSERT SURROUNTING CALL STATEMENTS BETWEEN THESE TWO CARDS
END
```

See Appendix F for sample deck set ups for an IBM installation. The user should check with someone who is familiar with his/her installation for the exact form of the control cards necessary to run this job.

5.8 Subroutine Description and Calling Statements

In the following descriptions IST stands for the strata calling number (i.e., the specified calling number as described in section 5.7) and NST stands for the number of libraries in the group or stratum. The user should refer to samples of all output tables found in Appendix E.

1. SUBHLD, the subroutine to generate the holdings table (Table I) is called with the statement CALL SUBHLD (IST,NST). This subroutine uses information in cards 2-11 (from page 4 of Form #2).
2. SUBSTF is the subroutine to generate tables on staffing, either Table II, staffing for the entire library, or Table B for individual departments. The statement CALL SUBSTF (IST,NST,i) is used, where i is a single digit number 1 to 7, that coincides with the column in which the information is recorded on page 6 of Form #2. For example, a CALL SUBSTF (IST,NST,1) produces the Table II series for the entire library while CALL SUBSTF (IST,NST,3) produces the Table VIIIB series for the acquisitions department. The tables for the individual departments can also be generated in the departmental subroutines (see subroutines 7, 8, and 9 below).
3. SUBPRC, the subroutine to generate the Table III series on processing and reference support and Table IV on computer systems used within the library, from the data provided on pages 8 through 12 (of Form #2) is called with CALL SUBPRC (IST,NST).
4. SBEQCM, the subroutine to summarize the data on equipment and communications (from page 13, Form #2) into a single table is called with the statement CALL SBEQCM (IST,NST).
5. SUBBDG, is the general budget profile subroutine which generates the Tables VI and VI A for the whole library and the series of A:Budget Profile tables for the individual departments. The statement CALL SUBBDG (IST,NST,i), where i is the number of the column in which the data appear on pages 14 and 15, accesses this subroutine. For example, CALL SUBBDG (IST,NST,1) produces the Tables VI and VI A, while CALL SUBBDG (IST,NST,4) produces the Table IX A series for the cataloging department. As with the staffing subroutine, the departmental budget profile can also be produced in the subroutines for individual departments (see 7, 8, 9 below).
6. SUBRGN is the subroutine which generates the series of tables VII A through VII E, summarizing the data on regional services from pages 16 to 20 of Form #2. The statement CALL SUBRGN (IST,NST) calls this subroutine and generates the five tables for regional libraries.

7. SUBACQ is a three-part subroutine which profiles the acquisitions department. SUBACQ is called with CALL SUBACQ (IST,NST,i) where i = 1 or 2. If i = 1, i.e., CALL SUBACQ (IST, NST,1), the entire profile is produced including Table VIII A budget and Table VIII B, Staffing and Table VIII C. If i = 2, only Table C, Ordering Patterns, is produced.
8. SUBCAT, called with CALL SUBCAT (IST,NST,i) where i is 1 or 2, as in 7above, produces the series of 3 cataloging profile tables IX-A, budget profile, IX-B, staffing and salary expenditures, and IX-C, cataloging patterns.
9. SUBILL, as in both 7 and 8 above is called with CALL SUBILL (IST, NST, i). SUBILL can produce the entire series of inter-library loan profile tables, including budget (table X-A), staffing (table X-B) and volume (table X-C). If i = 1 the subroutine in turn calls both SUBBDG and SUBSTF to produce table X-A and X-B, in addition to producing Table X-C through X-L. If i = 2, then only Tables X-C through X-L are produced.
10. SUBADM produces the two tables XI, budget (A) and staffing (B) for administrative department overhead with CALL SUBADM (IST, NST).

The reader is reminded that call statements (e.g., CALL SUB____) must begin in column 7.

THE INTERLIBRARY LOAN SURVEY

6.1 Introduction

The interlibrary loan survey is based upon two instruments, one to monitor borrowing requests (Form #8) and the other to monitor lending requests (Form #9). As with the other instruments used in these studies, forms #8 and #9 are coded for keypunching directly from the form. Where the requested information is the same on the two forms, both borrowing and lending, data are punched into the same columns. The only differences between ILL survey instruments used by the case study libraries and those instruments used by other libraries (Forms #8a and #9a) in the survey, was the additional staff time spent on ILL tasks (e.g., verification of the request) at the end of the instruments required for the case studies. If the user wishes to analyze these tasks on Forms #8 and #9, the same methodology as that employed in activity sheets (Section 4) should be used. The user should make the necessary format changes to adjust Forms #8 and #9 task data to activity sheet specifications.

Since WILCO surveyed libraries of varied size and type, participating libraries were asked to sample their interlibrary loan activity. This sampling measure necessitated a weighting structure corresponding to the sampling interval. The sampling intervals vary from every transaction to only one transaction in twenty.

Due to the availability of excellent systems for the statistical evaluation of a survey of this type (e.g., SPSS and OSIRIS), it was felt unnecessary to develop original programs for this analysis. OSIRIS, a system of canned packages developed by the University of Michigan, was available through the IBM system used for these studies and used for analysis of the survey.

In the interlibrary loan survey, we maintained the divisions of libraries according to type and size, since borrowing and lending characteristics differ widely according to these variables. The reader should refer to section 5.3 for the method of stratification of libraries employed in these studies.

Section 6.2 describes the keypunching procedures and section 6.3 contains a suggested list of tables that the reader may wish to generate using one of the statistical systems available on the market.

6.2 Keypunching and Data Preparation Procedures

Similar to the format of keypunched cards for other forms employed in these studies, the first ten columns are reserved for identification useful to both the user and the computer system. The following table specifies the data required in each of these ten columns.

Table 6-1. Format of the First Ten Columns

| <u>Col #</u> | <u>Explanation</u> |
|--------------|---|
| 1 | form number, either 8 or 9 |
| 2,3 | blank |
| 4,5 | the sampling interval (e.g., 1, 3, 5, etc.) |
| 6 | blank |
| 7, 8, 9 | library number |
| 10 | blank |

On the instruments, the date of patron request or date request received (18-22) and the date of disposition (23-26) were allocated 4 columns. Each was punched as mmdd (i.e., two digits for the month and two for the day, so that May 24, 1976 would be punched 0524). The publication date (item I-B on both forms) is allocated 8 columns, and is punched mmddyyyy. The same date exemplified above would be punched 05241976 in columns 28 through 35. The obvious reason for the use of four digits to indicate year of publication is to distinguish pre-twentieth century publications.

On the lender's transaction log (Form #9), item III, on re-verification can be placed in any of three columns: 48, 49, or 50. The user should be consistent in the use of the column number that he/she chooses. The remaining columns should be punched according to the specified column numbers appearing on the form.

6.3 Tables Generated for These Studies That Might be of Interest

The user can choose from a wide variety of possible correlations obtainable from the data on the forms. Obviously, the list of possible correlations is lengthy. For the interlibrary loan survey, we found that the following list of univariate and bivariate tables were useful in analyzing the data:

FOR BOTH BORROWING AND LENDING TRANSACTION LOGS

Type of publication: by publication date; by language; by reason for this type of agency; by type of agency (requester or lender); by verification tool; by form of loan requested or loaned; by fill rate.

Publication date: by all of the above; by call number classification range.

Language: by call number classification; by reason for choice of agency; by type of agency (requester or lender); by verification tool; by fill rate.

Borrower or lender type: by location; by fill rate; by communication employed; by time lag.

Delivery method: by location of agency (borrower or lender).

FOR BORROWING TRANSACTION LOGS ONLY (Form #8)

Reason for choice of agency: by type of library material requested; by fill rate; by verification tool.

Verification tool: by fill rate.

Re-requested: by time lag.

Location: by time lag.

FOR LENDERS TRANSACTION LOGS ONLY (Form #9)

Segregate results by regional/non-regional requests.

Verification (yes/no/unknown) by requesting library type.

Reason for non-fill: by type of requesting library.

Disposition of request: by type of library.

APPENDIX A
Publications List and Availability Statement

REFERENCES AND BIBLIOGRAPHY OF WILCO PUBLICATIONS

Publications listed below with a price and WICHE catalog number may be ordered, pre-paid, from Publications Unit, WICHE, P.O. Drawer P, Boulder, Colorado 80302. Other items may be requested from WILCO at the same address; items followed by an asterisk are not stocked, and Xerox copies at \$.10 per page will be furnished upon request.

1. A Proposal for Design and Development of a Western Interstate Bibliographic Network. Western Interstate Commission for Higher Education (WICHE), Boulder, Colorado, March 21, 1975, 88p. (*)
2. Initiating the Design and Development of a Western Interstate Bibliographic Network. WICHE, Boulder, Colorado:
First Quarterly Report, July-September 1975. December 15, 1975, 83p.
Second Quarterly Report, October-December 1975. February 25, 1976, 54p.
Third Quarterly Report, January-March 1976. May 31, 1976, 85p.
Fourth (Final) Quarterly Report, April-August 1976, October 22, 1976, 125p.
(Cat. #2B136, \$3.50)
3. Pearson, K. M. and the Project Staff. A Review of Potential Components for the Western Bibliographic Network, WICHE, March 5, 1976, 72 p. (Catalog #2B121, \$2.50)
4. WILCO Newsletter. (Formerly Western Network Newsletter.) WILCO, WICHE, Boulder, Colorado. Number 1-
5. Assessing the Impact of On-Line Access to Location Data on Interlibrary Loan Patterns. WICHE, Boulder, Colorado, 5 January 1976, 67p. (*)
6. Minutes of the Western Network Project Organizing Steering Committee Meeting, Boise, Idaho, February 2-3, 1976, WICHE, February 18, 1976. (*)
7. Pearson, Karl M., Jr. Survey of Union Serials Data Bases in the West. WILCO, WICHE, Boulder, Colorado, 30 September 1976, 8 p. (N-16/000/02). (*)
8. Butler, Brett. Discussion Report: WICHE "Western Networks" Meeting, Denver, Colorado, March 203, 1976. Butler Associates/R&D Consultants, Los Altos, California, March 16, 1976, 12 p. (*)
9. Montague, Eleanor A. et al. Western Interstate Cooperative Bibliographic Network Alternatives for Action. WICHE, Boulder, Colorado, March 1976, 66 p. (Draft working paper; limited distribution.)
10. A Proposal for Facilitating Equitable Interstate Sharing of Library Resources in the West. WICHE, Boulder, Colorado, March 31, 1976, 57p. (*)
11. Duggan, Maryann. The WICHE Project for Continuing Education of Library Personnel: An Analytical Summary of the Past and Alternatives for the Future. WICHE, Boulder, Colorado, March 1976, 67p. (working paper, limited distribution)

12. Gassler, Scott. Economic Issues in the Networking of Library Technical Support Services. WICHE, Boulder, Colorado, October 1976, 20p.(Cat. #2B131, \$1.50)
13. Library Networking in the West: The Next Three Years. WILCO, WICHE, September 1976, 19p. (Fifth Draft) (Cat. #2B127)
14. Telecommunications and Message Processing for Library Networking: A System Concept and Proposal Outlines. WILCO, WICHE, July 7, 1976, 12 p. (*)
15. Survey of Costs in Technical Processing and Interlibrary Loan -- Survey Tables and Cost Studies Results (Cat. #2B129, \$not set yet)
16. Survey of Costs in Technical Processing and Interlibrary Loan -- Summary (Cat. #2B130, \$not set yet)
17. Librarian's Handbook for Costing Network Services (Cat. #2B134, \$not set yet)
18. Costs in Technical Processing and Interlibrary Loan -- Data Processing Users Manual (Cat. #2B133, \$not set yet)
19. Final Report of the Project "Conducting Cost and Funding Studies Concerning Development and Implementation of Western Interstate Bibliographic Network" (Cat. #2B132, \$not set yet)

The potential user who wishes copies of the programs for the analysis of the survey data should contact the WICHE Publications Unit, P.O. Drawer P., Boulder, Colorado 80302 for availability and cost information.

APPENDIX B
DEFINITION OF TERMS AND MATHEMATICAL FORMULAE

Alphabetic Codes: Codes containing any letters from the alphabet.

Alphanumeric Codes: Codes containing alphabetic and numeric characters.

Average (Arithmetic Mean): the number obtained by dividing the sum of a set of numbers by the number of elements in the set.

Bivariate Analysis: the analysis of the dynamic relationship between two variables (i.e., to what degree (if any) do two variables change with respect to one another). An analysis of the joint distribution of two variables. For example, the analysis of library funding with respect to inflation.

Blank: code used to indicate missing data; a blank column is one that contains no punch. Indicated in this text as Ø.

Call Statement: A program statement which transfers control of the program to a subprogram. This subprogram returns control of the program to the next statement of the main body of the program when it is finished (usually indicated by a RETURN statement.)

Card: A data storage medium which is used to enter information into a computer by means of a series of holes punched into it. The standard punched card is 7 3/8 inches (18.7cm) wide and 3 1/4 inches (8.2cm) high and contains 80 columns for information.

Card Number: Code used when there is more than one card of input to indicate the sequence of input.

Character: One numeric digit, alphabetic character, or punctuation mark.

Column: One of 80 vertical sections (positions) of a punched card. Each column may contain a single character, e.g., a 1 is a 1 punch in a column.

Data: Numerical information in a form appropriate for processing by the computer.

Data element: A single piece of numerical information. For example, 26 would represent a data element, however 2, and 6, would represent two data elements.

Data Set: The set of all data elements which logically belong together and are ready to input to the computer.

Deck: A set of punched cards.

Dictionary: A list of words or partial words, or sets of words which are combined to form sentences, phrases or other words for output or for identification of output (e.g., table titles, column headers on printed output). The dictionary simplifies PRINT statements within the program. It is often more efficient to have the system write words numbered 5, 7, 10, 20 on line one, and words numbered 5, 6, 8, 11, 21 on line two, than to have commands within the program for the system to write:

"the quick brown fox," and

"jumped over the lazy dog."

Disk: A data storage medium, similar to tape in terms of usage.

Field: a single column or a series of columns on a punched card which specifies a single data element. The field of columns 16-20 contains 5 columns, 16, 17, 18, 19, and 20.

FORTRAN: (FORmula TRANslator). The name given to a system which translates formulae into the computer's language. One of the oldest and best standardized (ANS-American National Standard) languages in the computer business. All FORTRAN statements must start in column 7. Programs written in ANS (American National Standard) FORTRAN are generally portable between systems from the same manufacturer and between machines from different manufacturers.

ID Number: The unique identifying number for every respondent (library or employee) for which there are data needs.

Input: The set of data or information which is fed to the computer for processing.

Input Stream: The ordering of the input to a computer system. For example, card 11 comes before card 12. That is, the deck of input information, in the appropriate order which the computer must (or expects) to read data.

JCL: Job control language, usually used in system control statements at the beginning and end of programs; Each machine usually has a unique JCL.

Job: A computer run, including programs and data which produces output.

Keypunch: A machine to punch (or prepare) cards for input. The keyboard of the machine resembles a typewriter, and by striking a key, the machine produces the appropriate holes in the card for the computer to "read" the character or number as reflected on the key. Also, the process of punching data onto cards.

Output: The set of data which the computer produces by processing or massaging the input; the results obtained from the running of a program. In this system all output is printed.

Print-Out: Output on paper.

Program: A series of statements to instruct the computer to perform manipulations on input and produce output.

Punch: The square holes on a computer card designating numeric and alphabetic codes in each column of card; the process of keypunching.

Right Justified: Information (data) is placed as far to the right in the allocated field as possible. That is, if the allocated field is (16-20), the number 26 is punched 26 (where means a blank column) and not 26 (which would be read as 2600).

Standard Deviation: A statistical measure equal to the square root of the variance. The variance is the sum of the squares of the differences of observations from the mean. The standard deviation indicates a relative closeness of the set of data to the mean. A large standard deviation relative to the magnitude of the arithmetic mean implies that the data are not grouped near the mean.

Subprogram: See subroutine.

Subroutine: A program which is called from another program or subprogram. All data and statements are independent from the calling program. Control of the flow of the processing of the data is transferred to the subroutine through the "CALL" statements, and data are passed through allocated blocks of data storage "common" to both programs.

System: A series of connected programs to process data and produce output. The difference between a system and a series of programs is that with the system the user is able to select the output he/she desires and to some extent the input he/she intends to provide, while with a program the user is confined to the specified input and the specified output.

Tape: A data storage medium for the computer.

Univariate Analysis: The analysis of the responses to a single question. That is, an analysis of the distribution of a single variable over all observations.

Verification: The process of checking punched cards (or tape) for accuracy.

MATHEMATICAL FORMULAE

Average (mean) of i elements of weight f_i

$$\bar{x} = \frac{\sum f_i x_i}{\sum f_i}$$

Standard Deviation, of i elements of weight f_i , with mean \bar{x}

$$\mu_2 = \frac{\sum f_i (x_i - \bar{x})^2}{\sum f_i}$$

Holdings Growth

$$\Delta H = \frac{\sum_{i=2}^4 HLD_i - HLD_{i-1}}{\sum_{i=2}^4 HLD_i} \text{ where } HLD_i = \text{non-zero for year } i$$

Average Salary per FTE

$$SF = \frac{\sum \text{salaries}}{\sum \text{FTE}} \begin{cases} \text{for each employee grouping,} \\ \text{for total library and/or each department} \end{cases}$$

Percent of budget allocated to ___ (any department)

$$PB = \frac{\text{department budget}}{\text{total library budget}} \times 100$$

Annual budget expenditure per throughput

$$EPT = \frac{\text{department expenditure last reporting year}}{\text{department items processed last reporting year}}$$

Hourly cost (for those employees on annual salary)

$$HC = \frac{AS(1+FB)}{(2080 - 8 \times DZOF - SAB) \times K \times K'}$$

Where AS = annual salary

FB = fringe benefit rate as stated/100

DZOF = total paid holidays annually

SAB = days of sabbatical accrued annually

K = fraction of week worked if less than 40 hours

K' = fraction of year worked if less than 12 months

Hourly cost (for those employees that receive hourly wages)

$$HC = HW (1+FB)$$

Where HW = hourly wages as stated and FB = fringe benefit rate as stated/100

APPENDIX C
SAMPLES OF REVISED PAGES

STAFF (CONT'D)

PLEASE INDICATE IN THE FOLLOWING TABLE, THE FULL-TIME EQUIVALENCIES IN EACH CATEGORY. PLEASE INCLUDE OPEN POSITIONS AS WELL. ALSO FOR EACH CATEGORY, INDICATE THE TOTAL ANNUAL SALARY EXPENDITURE, EXCLUDING FRINGE BENEFITS. INCLUDE OPEN POSITIONS IN SALARY CALCULATIONS ALSO. NOTE THAT SALARY EXPENDITURES SHOULD CORRESPOND TO THE NUMBER OF FULL-TIME EQUIVALENTS (FTE) IN EACH CATEGORY.

I. PLEASE INDICATE BELOW THE STAFF BENEFIT RATE (PERCENT OF SALARY) GIVEN TO EMPLOYEES IN EACH OF THE FOLLOWING CATEGORIES:

1. Professional Librarian _____ (11-14)
2. Other professional _____ (15-18)
3. Library assistant _____ (19-22)
4. Clerks _____ (23-26)
5. Student assistant/page _____ (27-30)
6. Other (excluding staff involved in plant maintenance) _____ (31-34)

J. PLEASE INDICATE BELOW THE FULL-TIME EQUIVALENCIES (FTE) PRESENTLY EMPLOYED IN YOUR LIBRARY IN THE FOLLOWING FUNCTIONS OR POSITIONS:

1. Business and financial staff (excluding cook and bookkeepers) _____ (35-38)
2. Book fund bookkeepers _____ (39-42)
3. Library planning _____ (43-46)
4. Library fund raising _____ (47-50)
5. Systems analysts _____ (51-54)
6. Programmers _____ (55-58)

K. PLEASE INDICATE THE AVERAGE SALARY INCREASES GIVEN DURING THE FOLLOWING YEARS BY CATEGORIES OF EMPLOYEE. THIS SHOULD REPRESENT THE COMBINED PERCENTAGE INCREASES OF NEAT AND COST-OF-LIVING INCREASES. *PROMOTIONAL INCREASES GIVEN TO EMPLOYEES MOVING INTO NEW POSITIONS SHOULD NOT BE INCLUDED.

| TYPE OF EMPLOYEE | 1974 | 1975 | 1976 (est.) |
|---|-------|-------|-------------|
| 1. Professional Librarian | 11-13 | 14-16 | 17-19 |
| 2. Other professional | 20-23 | 23-25 | 26-28 |
| 3. Library assistants | 29-31 | 32-34 | 35-37 |
| 4. Clerks | 33-40 | 41-43 | 44-46 |
| 5. Student assistant/page | 47-49 | 50-52 | 53-55 |
| 6. Other(excluding staff involved in plant maintenance) | 56-58 | 59-61 | 62-64 |

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4. PLEASE DESCRIBE THE PRIORITY THE LIBRARY HAS IN USING THE SYSTEM(S) DESCRIBED IN QUESTIONS (E) THROUGH (L). IF MORE THAN ONE SYSTEM IS EMPLOYED BY THE LIBRARY, INDICATE EACH SYSTEM SEPARATELY. PRIORITY OF THE SYSTEM IS CONSIDERED TO BE THE PRECEDENCE THE LIBRARY HAS IN USING THE SYSTEM (e.g. third priority after accounting and financial aids, first before any other unit may use the system).

V. EQUIPMENT, COMMUNICATIONS, AND RELATED SUPPLIES

- A. PLEASE ESTIMATE THE ANNUAL COST EXPECTED DURING THE CURRENT REPORTING YEAR FOR COPYING EQUIPMENT RENTAL, SUPPLIES AND MAINTENANCE USED FOR INTERNAL LIBRARY FUNCTIONS (EXCLUDE COSTS FOR COPYING EQUIPMENT AND SUPPLIES WHICH ARE PATRON REQUESTED, OR FOR EQUIPMENT FOR PUBLIC USE). \$ _____ (c46)
- B. PLEASE ESTIMATE THE ANNUAL COSTS EXPENDED DURING THE CURRENT REPORTING YEAR FOR THE FOLLOWING AREAS OF COMMUNICATIONS AND RELATED EQUIPMENT, SUPPLIES, AND MAINTENANCE COSTS.
1. TELEX (an automatic teleprinter exchange switching service provided by Western Union) equipment rental, maintenance, supplies and communications charges. \$ _____ (18-24)
 2. TELETYPE EXCHANGE SERVICE, TWX, (an automatic dialed teleprinter exchange switching service provided by Western Union on a commercial toll basis) equipment rental, maintenance, supplies and communication charges. \$ _____ (25-31)
 3. DATATEL or DATEL (data or high-speed telegraph system coordinated with voice connections) equipment rental, maintenance, supplies and communications charges. \$ _____ (32-38)
 4. OTHER TELETYPE SERVICE, equipment rental, maintenance, supplies and communications charges. \$ _____ (39-45)
 5. FACSIMILE (FAX) TRANSMISSION (of pictures, maps, etc.), equipment rental, supplies, maintenance and communications charges. \$ _____ (46-52)
 6. DATAPHONE (data or high speed telephone system), equipment rental, maintenance, supplies and communication charges. \$ _____ (53-59)
 7. CFT (CATHODE RAY TUBE) OR REMOTE ACCESS TERMINAL, equipment rental, supplies, maintenance and communication charges providing interactive access to computer via a television-like screen or line printer and keyboard. \$ _____ (60-66)
 8. LINE CHARGES, LEASED LINES, OTHER MEANS OF COMMUNICATIONS TO AUTOMATED SYSTEMS (COMPUTER) NOT INCLUDED IN ABOVE. \$ _____ (67-73)
 9. TELEPHONE, OTHER THAN ABOVE. \$ _____ (70-80)
 10. OTHER COMMUNICATIONS COSTS EXPECTED (SPECIFY) _____
- TOTAL COMMUNICATIONS COSTS \$ _____
Initials _____

W. PLEASE INDICATE BELOW INSTITUTIONS (INCLUDING BIBLIOGRAPHICAL CENTERS) WHICH MOST FREQUENTLY REQUEST MATERIALS FROM YOUR LIBRARY. RANK ACCORDING TO THE NUMBER OF REQUESTS MADE ANNUALLY, IF POSSIBLE. INDICATE THE NUMBER OF REQUESTS RECEIVED BY YOUR LIBRARY FROM THIS LIBRARY OR CENTER DURING THE LAST REPORTING YEAR, IF THIS STATISTIC IS AVAILABLE.

| LIBRARY NAME | LOCATION | NUMBER OF REQUESTS RECEIVED LAST YEAR (677) |
|--------------|----------|--|
| 1. | | (11,12) |
| 2. | | (13,14) |
| 3. | | (15,16) |
| 4. | | (17,18) |
| 5. | | (19,20) |
| 6. | | (21,22) |
| 7. | | (23,24) |
| 8. | | (25,26) |
| 9. | | (27,28) |
| 10. | | (29,30) |

11. WHAT PERCENT OF THE TOTAL REQUESTS RECEIVED BY YOUR LIBRARY FROM OTHER LIBRARIES (AS ENTERED IN QUESTION (J)) DO THE ABOVE REPRESENT? _____ % (31-33)

X. PLEASE INDICATE BELOW THE TEN SOURCES (INCLUDING BIBLIOGRAPHIC CENTERS) FROM WHICH YOU MOST FREQUENTLY BORROW MATERIALS. RANK ACCORDING TO THE NUMBER OF REQUESTS THAT YOUR LIBRARY MAKES ANNUALLY, IF POSSIBLE. INDICATE THE NUMBER OF REQUESTS MADE OF THIS INSTITUTION DURING THE LAST REPORTING YEAR IF THIS STATISTIC IS AVAILABLE.

| LIBRARY NAME | LOCATION | NUMBER OF REQUESTS MADE LAST YEAR (31-33) |
|--------------|----------|--|
| 1. | | (34,35) |
| 2. | | (36,37) |
| 3. | | (38,39) |
| 4. | | (40,41) |
| 5. | | (42,43) |
| 6. | | (44,45) |
| 7. | | (46,47) |
| 8. | | (48,49) |
| 9. | | (50,51) |
| 10. | | (52,53) |

11. WHAT PERCENT OF THE TOTAL REQUESTS MADE, AS ENTERED IN QUESTION (C), DO THE ABOVE REPRESENT? _____ % (54-56)

APPENDIX D
SAMPLES OF CORRECTLY PUNCHED DATA



.....77 READ &77 WRITTEN..DOTS-E0J.. COND CODE=0000

62.

| | | | RECORD # | LENGTH |
|--|----------------|-------|----------|--------|
| 1•••5•••10•••5•••20•••5•••30•••5•••40•••5•••50•••5•••60•••5•••70•••5•••80•••5•••90•••5•••100 | | | 57 | 80 |
| 90020 011 | 405 071607202 | 19751 | 2 422 | 35 |
| 90020 011 | 109 070907092 | 19721 | 6 23 | 27 |
| 90020 011 | 229 070907092 | 19754 | 2 132 | 3627 |
| 90020 011 | 725 071307162 | 19761 | 1 132 | 36 |
| 90020 011 | 468 071607162 | 19671 | 2 132 | 35 |
| 90020 011 | 37 071507162 | 19751 | 1 222 | 36 |
| 90020 011 | 871 071407164 | 19741 | 2 132 | 35 |
| 90020 011 | 384 071607162 | 19691 | 2 232 | 35 |
| 90020 011 | 701 071607162 | 19763 | 2 132 | 35 |
| 90020 011 | 157 071507162 | 19731 | 2 132 | 36 |
| 90020 011 | 194 071507199 | 19752 | 2 131 | 5 |
| 90020 011 | 654 071907192 | 19751 | 1 242 | 36 |
| 90020 011 | 563 071607192 | 19751 | 2 232 | 35 |
| 90020 011 | 112 071407264 | 19742 | 2 232 | 56 |
| 90020 011 | 586 071207124 | 19741 | 2 232 | 26 |
| 90020 011 | 783 071907232 | 19771 | 2 332 | 35 |
| 90020 011 | 449 071607222 | 19751 | 2 332 | 35 |
| 90020 011 | 292 071507224 | 19741 | 2 232 | 35 |
| 90020 011 | 168 072007222 | 19651 | 2 132 | 35 |
| 90020 011 | 341 071507162 | 19621 | 2 132 | 35 |
| 90020 011 | 115 071507162 | 19673 | 2 132 | 35 |
| 90020 011 | 458 071007162 | 1975 | 2 232 | 35 |
| 90020 011 | 257 071507162 | 19741 | 2 232 | 35 |
| 90020 011 | 831 071407204 | 19541 | 2 132 | 15 |
| 90020 011 | 74 071407162 | 19112 | 1 242 | 27 |
| 90020 011 | 920 072007232 | 19651 | 2 132 | 35 |
| 90020 011 | 419 071607262 | 19711 | 2 432 | 57 |
| 90020 011 | 595 071207162 | 19751 | 1 422 | 57 |
| 90020 011 | 39 071407162 | 1941 | 2 322 | 26 |
| 90020 011 | 2000 071407261 | 19491 | 1 422 | 57 |
| 90020 011 | 972 071407294 | 19751 | 2 132 | 16 |
| 90020 011 | 635 071907202 | 1951 | 2 132 | 36 |
| 90020 011 | 969 072007203 | 19621 | 2 432 | 56 |

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APPENDIX E
TABLES GENERATED FROM THE SURVEY INSTRUMENT DATA

and volume processed or purchased annually. Support services include pre-processing, automated cataloging systems, printed card sets and automated buying.

Table IV: Unique Computer Support: A table of self-contained support systems developed exclusively for the library by contract and used exclusively by the library or parent institution, or an automated system developed for the library in-house by library staff or staff from the parent organization, are analyzed by function, developmental and annual maintenance costs. These systems often support several functions; however, in presentation only the first function supported is indicated.

Table V: Equipment and Communications Costs: The annual costs for copying, TELEX, TWX, Datatel, other teletype communications, facsimile transmission, dataphone, remote access terminals, lines to a computer center and telephone are displayed.

Table VI: Budget and Expenditure Patterns: A summary of the current year budget, and the related increases (or decreases) over last year's expenditures are included. Budget categories include capital expenditures, materials budgets, and operating budgets.

Table VI-A: Budget and Expenditure Patterns: Departmental Allocations: Four separate tables indicating the percent of budget allocated to administration, acquisitions, cataloging, serials, interlibrary loan and materials finishing by budget category.

Table VII-A: Regional Library Summary--Services Provided by Regional Libraries: A table indicating the number of libraries providing regional support to other libraries in the region by type of support service.

Table VII-B: Regional Library Summary--Types of Libraries Supported: The types of libraries (public, academic, school, special) in the region supported by participants, and the number of libraries supported.

- Table VII-C: Regional Library Summary--Regional Interlibrary Loan: A synopsis of interlibrary loan handled through regional centers, including volume, fill rate, percentage filled within the library, from another library in the region, forwarded to the state library, another library outside the region, bibliographic center, or returned to the requestor with location information or unfilled.
- Table VII-D: Regional Library Summary: Regional Catalog Maintenance: An overview of the type of union catalog or list maintained by regional center participants, including types of materials, titles held and added annually, locations and average locations per title, and the age of the catalog.
- Table VII-E: Regional Library Summary--Reimbursement: A table indicating the amount, type and source of reimbursement (if any) received by regional libraries.
- Table VIII-A: Acquisitions Department--Budget Profile: Two tables indicating acquisitions operating budgets and related cost per volume throughput examined by budget category. Increase over last year's expenditures are also examined.
- Table VIII-B: Acquisitions Department--Staffing and Salary Expenditures: A two-page summary of staffing patterns within acquisitions, including salary expenditures and average salaries by type of employee.
- Table VIII-C: Acquisitions Department--Ordering Patterns: Types of materials are examined, along with types of ordering performed (standing order, approval plans, order requests, gift exchange). Additionally, the year of imprint of materials expected to be ordered during the current year, percent of acquisitions for serial backfile supplement and monograph retrospective collection development are examined.
- Table IX-A: Cataloging Department--Budget Profile: A two-page summary of the budget for the current year, and resulting cost per throughput within the cataloging department by budget category, along with increases by budget category.

- Table IX-B: Cataloging Department--Staffing and Salary Expenditures: A summary of staffing patterns within cataloging department, title throughput per cataloging FTE, and related cataloging salary costs per throughput.
- Table IX-C: Cataloging Department--Cataloging Patterns: An overview of the types of materials cataloged annually, the cataloging source used, lag times, backlog, and cards per record entry. Proof slip subscriptions are also examined.
- Table X-A: Interlibrary Loan Department--Budget Profile: Two tables indicating departmental budget, and increases (or decreases) over previous year budgets, along with expenditures per request throughput (both borrowing and lending).
- Table X-B: Interlibrary Loan Department--Staffing and Salary Expenditures: A two-page summary of staffing patterns within interlibrary loan, including salary expenditures, average salaries by type of employee, volume and average salary cost per request (both borrowing and lending).
- Table X-C: Interlibrary Loan Department--Volume of Borrowing Requests: A summary of ILL borrowing requests, including fill rate, percent filled locally (a designation made by the participant to indicate geographical proximity for which interlibrary loan turnaround was lowest) and percent filled within the state of the participant.
- Table X-D: Interlibrary Loan--Number of Institutions Typically Queried: A synopsis of the number of libraries typically queried by respondents prior to a completed (filled or discontinued) request, indicating the mean and mode.
- Table X-E: Interlibrary Loan Department--Time Required to Fill a Request: A summary of the typical lag time of requests to completion through a bibliographic center, a local library, elsewhere in state, in adjoining states and elsewhere in the country.
- Table X-F: Interlibrary Loan Department--Verification Policies: A summary of the libraries reporting verification of borrowing and lending requests.

- Table X-G: Interlibrary Loan Department--Frequency of Borrowers
Table: A summary by type of library of the ten most frequent borrowers of materials from respondents, and observed ranks of these types of libraries.
- Table X-H: Interlibrary Loan Department--Frequency of Lenders
Table: A summary by type of library of the ten most frequent lenders of materials to respondents and the observed ranks of these types of libraries.
- Table X-I: Interlibrary Loan Department--Location of Borrowers
Table: A summary by location (local, elsewhere in state, adjoining states, other western states, elsewhere) of the ten most frequent borrowers of materials cited by respondents, and the observed ranks of these locations.
- Table X-J: Interlibrary Loan Department--Location of Lenders
Table: A summary by location (local, elsewhere in state, adjoining states, other western states, and elsewhere) of the ten most frequent lenders of materials to participants cited by respondents, and the observed ranks of these locations.
- Table X-K: Interlibrary Loan Department--Characteristics of Filled Borrowing Requests: A two-page report of volume of requests filled from the participating library collection by type of materials, and percentage loaned in original or duplicate form.
- Table X-L: Interlibrary Loan Department--Characteristics of Filled Lending Requests: A two-page summary of requests lent to the participating library by type of materials, form of loan and volume of filled requests.
- Table XI-A: Administration Department Budget Profile: Two tables indicating departmental operating budget for administration, and increases (or decreases) over previous year's expenditures, along with a summary of last year's expenditures in administration.
- Table XI-B: Administration Department--Staffing and Salary Expenditures: Two tables summarizing staffing patterns within library administration by type of employee, and indicating salary expenditures, and salary expenditures per total library staff.

A: SURVEY OF 100 LIBRARIES, LARGE

TABLE I: HOLDINGS DISTRIBUTION
10 LIBRARIES INCLUDED

| TYPE OF PUBLICATION | NUMBER OF LIBRARIES REPORTING | TITLES | | | GROWTH | NUMBER OF LIBRARIES REPORTING | AVGAGE | LOW | HIGH | VOLUME HIGH | STD DEV | GROWTH |
|------------------------------|-------------------------------|---------|--------|---------|---------|-------------------------------|--------|---------|--------|-------------|---------|--------|
| | | AVERAGE | LOW | HIGH | | | | | | | | |
| BOOKSTOCK | 8 | 744104 | 378750 | 980000 | 177951. | 0.06 | 10 | 1291306 | 473437 | 2040000 | 477456. | 0.06 |
| ROUND PFRONTALS | 0 | 0 | 0 | 0 | 0.0 | 0 | 3 | 220039 | 167377 | 254928 | 37888. | 0.06 |
| MICROFORM BOOKS | 4 | 1147126 | 8505 | 1600000 | 665710. | 0.11 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| MICROFORM PFRONTALS | 2 | 352 | 75 | 630 | 278. | 0.25 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| PRINTED GOVERNMENT DOCUMENTS | 8 | 446328 | 89640 | 960000 | 305609. | 0.07 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| AUDIO / VISUAL MATERIALS | 8 | 139861 | 2226 | 598084 | 196290. | 0.08 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| OTHER | 3 | 137266 | 3700 | 359100 | 157293. | 0.01 | 0 | 0 | 0 | 0 | 0 | 0.0 |

| TYPE OF PUBLICATION | NUMBER OF LIBRARIES REPORTING | VOLUME TO TITLE RATIO | | | STD DEV |
|---------------------|-------------------------------|-----------------------|---------|---------|---------|
| | | AVGAGE | LOW | HIGH | |
| BOOKSTOCK | 8 | 1.62:1 | 1.15:1 | 2.10:1 | 0.35 |
| ROUND PFRONTALS | 0 | 0.0 : 1 | 0.0 : 1 | 0.0 : 1 | 0.0 |

A: SUPPLY OF 100 LIBRARIES. PAGE ACADEMIC STRATUM

TABLE II: STAFFING DISTRIBUTION. ENTIRE LIBRARY

In LIBRARIES INCLUDED

| TYPE OF EMPLOYEE | NUMBER OF LIBRARIES REPORTING | FULL TIME EQUIVALENCES | | | STD DEV | NUMBER OF LIBRARIES REPORTING | AVG RATE | ANNUAL SALARY EXPENDITURES, \$ | | | STD DEV |
|--------------------------------------|-------------------------------|------------------------|-------|--------|---------|-------------------------------|----------|--------------------------------|----------|--|---------|
| | | LOW | HIGH | MEAN | | | | LOW | HIGH | | |
| PROFESSIONAL LIBRARIAN | 10 | 59.82 | 35.00 | 103.25 | 22.12 | 10 | 968213. | 563440. | 187566. | | 382695. |
| OTHER PROFESSIONAL LIBRARY ASSISTANT | 8 | 2.50 | 1.00 | 7.00 | 2.12 | 8 | 40433. | 13600. | 118908. | | 34955. |
| CLERK | 9 | 27.00 | 4.00 | 64.00 | 18.75 | 10 | 989030. | 273068. | 3116925. | | 809330. |
| STUDENT / PAGF | 9 | 54.73 | 21.97 | 95.32 | 23.42 | 10 | 255030. | 20200. | 497672. | | 140476. |
| OTHER STAFF PAY OUTSIDE SOURCES | 7 | 12.59 | 0.50 | 31.62 | 12.56 | 0 | 0. | 0. | 0. | | 0. |
| VOLUNTEER | 1 | 0.25 | 0.25 | 0.25 | 0.0 | 0 | 0. | 0. | 0. | | 0. |

| TYPE OF EMPLOYEE | NUMBER OF LIBRARIES REPORTING | AVERAGE SALARY PER FTE | | | STD DEV | NUMBER OF LIBRARIES REPORTING | AVG RATE | FRINGE BENEFIT RATES | | | STD DEV |
|--------------------------------------|-------------------------------|------------------------|--------|--------|---------|-------------------------------|----------|----------------------|--------|--|---------|
| | | LOW | HIGH | MEAN | | | | LOW | HIGH | | |
| PROFESSIONAL LIBRARIAN | 598.25 | 16144. | 14094. | 18561. | 1748. | 10 | 14.35% | 11.00% | 20.00% | | 2.53 |
| OTHER PROFESSIONAL LIBRARY ASSISTANT | 20.00 | 16173. | 13600. | 20000. | 1550. | 8 | 15.19% | 11.00% | 20.00% | | 2.77 |
| CLERK | 243.00 | 6755. | 5046. | 11083. | 1765. | 9 | 15.01% | 11.00% | 20.00% | | 3.06 |
| STUDENT / PAGF | 492.54 | 5137. | 3952. | 8567. | 1022. | 6 | 3.84% | 0.60% | 10.10% | | 1.24 |
| OTHER | 19.50 | 10349. | 7037. | 15048. | 2330. | 5 | 11.98% | 0.61% | 17.30% | | 5.90 |

A: SURVEY OF 100 LIBRARIES. LARGE ACADEMIC STRATUM

TABLE III: PROCESSING AND REFERENCE SUPPORT

1 LIBRARIES INCLUDED
9 LIBRARIES USING NO OUTSIDE SUPPORT
0 LIBRARIES USING OUTSIDE SUPPORT
0 LIBRARIES NOT RESPONDING

| DEPT / LIBRARY TASK DESCRIPTION | NUMBER OF LIBRARIES USING OUTSIDE SUPPORT FOR THIS TASK | INDICATING AVAILABLE TASK DATA | AVERAGE | LOW | ANNUAL VOLUME HIGH | STD DEV |
|---|---|--------------------------------|---------|--------|--------------------|---------|
| ACQUISITIONS | | | | | | |
| 1. SEARCHING FOR NEW TITLES | 3 | 2 | 33000* | 16000* | 50000* | 17000* |
| 2. CHECKING THAT TITLES ARE NOT IN LIBRARY | 0 | 0 | 0* | 0* | 0* | 0* |
| 3. CHECKING THAT TITLES ARE NOT BACK-ORDERED | 1 | 0 | 0* | 0* | 0* | 0* |
| 4. PRODUCING ORDERS FOR MATERIALS | 4 | 4 | 46325* | 8555* | 90000* | 36579* |
| 5. PRODUCING CLAIM/CANCEL NOTICES | 2 | 1 | 3500* | 3500* | 3500* | 0* |
| 6. ENCUMBRANCE OF BUDGETED FUNDS | 3 | 2 | 6100* | 200* | 12000* | 5900* |
| 7. PRODUCING PAYMENTS TO VENDORS OR SUPPLIERS | 0 | 0 | 0* | 0* | 0* | 0* |
| 8. PRODUCING LISTS OF NEW ACQUISITIONS | 2 | 2 | 26* | 12* | 40* | 14* |
| 9. PERIODIC STATISTICS ON ACQUISITIONS | 1 | 1 | 12* | 12* | 12* | 0* |
| 10. OTHER ACQUISITION PRODUCTS | 3 | 3 | 44344* | 532* | 99999* | 41462* |
| CATALOGING | | | | | | |
| 11. VERIFICATION THAT ITEM IS NOT CATALOGED | 1 | 1 | 50000* | 50000* | 50000* | 0* |
| 12. SEARCHING FOR CATALOGING DATA | 5 | 3 | 34600* | 19400* | 50000* | 12493* |
| 13. PRODUCING CATALOGING COPY | 6 | 4 | 20725* | 13000* | 31000* | 7585* |
| 14. PRODUCTION OF CATALOG CARDS | 5 | 4 | 38650* | 11400* | 99999* | 35745* |
| 15. PRODUCTION OF BOOK CATALOG | 0 | 0 | 0* | 0* | 0* | 0* |
| 16. PRODUCTION OF MICROFORM CATALOG | 0 | 0 | 0* | 0* | 0* | 0* |
| 17. PRODUCTION OF SHELF PREPARATION MATERIALS | 1 | 1 | 99999* | 99999* | 99999* | 0* |
| 18. CATALOG AUTHORITY CONTROL | 2 | 1 | 3000* | 3000* | 3000* | 0* |
| 19. PRODUCING SPECIALIZED BIBLIOGRAPHIES | 1 | 1 | 150* | 150* | 150* | 0* |
| 20. PRODUCING CATALOGING VOLUME STATISTICS | 3 | 3 | 8341* | 12* | 25000* | 11779* |
| 21. PRODUCING CATALOGING COST STATISTICS | 0 | 0 | 0* | 0* | 0* | 0* |
| 22. OTHER CATALOGING PRODUCTS | 2 | 2 | 6000* | 6000* | 6000* | 0* |

A: SURVEY OF 100 LIBRARIES, LARGE ACADEMIC STRATUM

TABLE III: PROCESSING AND REFERENCE SUPPORT

10 LIBRARIES INCLUDED

1 LIBRARIES USING NO OUTSIDE SUPPORT

9 LIBRARIES USING OUTSIDE SUPPORT

0 LIBRARIES NOT RESPONDING

| DEPT / LIBRARY TASK DESCRIPTION | NUMBER OF LIBRARIES USING OUTSIDE SUPPORT FOR THIS TASK | INDICATING AVAILABLE TASK DATA | AVERAGE | ANNUAL VOLUME | STD DEV |
|---|--|--------------------------------------|---------|---------------|---------|
| INTER - LIBRARY LOAN | | | | | |
| 23. VERIFICATION OF BIBLIOGRAPHIC INFORMATION | 3 | 2 | 1525. | 1200. | 1850. |
| 24. LOCATING HOLDING LIBRARIES | 4 | 2 | 689. | 317. | 1061. |
| 25. COMMUNICATING ILL REQUESTS TO LIBRARIES | 1 | 1 | 239. | 239. | 0. |
| 26. MONITORING STATUS OF ILL REQUESTS | 1 | 1 | 31. | 31. | 0. |
| 27. PAYING FOR ILL SERVICES | 2 | 1 | 183. | 183. | 0. |
| 28. CHECKING AVAILABILITY OF TITLES IN YOUR LIBRARY | 0 | 0 | 0. | 0. | 0. |
| 29. MONITORING THE STATUS OF LOANS | 0 | 0 | 0. | 0. | 0. |
| 30. BILLING FOR ILL SERVICES | 0 | 0 | 0. | 0. | 0. |
| 31. PERIODIC ILL STATISTICS | 1 | 1 | 12. | 12. | 0. |
| 32. OTHER ILL PRODUCTS (SPECIFY) | 2 | 2 | 2461. | 455. | 4467. |
| SERIALS | | | | | |
| 33. CLAIMING OF LATE PERIODICAL ISSUES | 1 | 1 | 12000. | 12000. | 0. |
| 34. CANCELLING OF PERIODICAL SUBSCRIPTIONS | 0 | 0 | 0. | 0. | 0. |
| 35. RENEWAL OF PERIODICAL SUBSCRIPTIONS | 1 | 0 | 0. | 0. | 0. |
| 36. CONTROLLING OF PERIODICAL BINDING OPERATIONS | 0 | 0 | 0. | 0. | 0. |
| 37. SERIALS CHECK-IN OF ISSUES | 3 | 2 | 88600. | 77200. | 99999. |
| 38. PAYING FOR EXISTING PERIODICAL SUBSCRIPTIONS | 2 | 1 | 20000. | 20000. | 0. |
| 39. OTHER SERIALS-ORIENTED PRODUCTS | 7 | 2 | 18. | 9. | 26. |

A: SURVEY OF 100 LIBRARIES, LARGE ACADEMIC STRATUM

IAHLL III: PROCESSING AND REFERENCE SUPPORT

10 LIBRARIES INCLUDED

1 LIBRARIES USING NO OUTSIDE SUPPORT

9 LIBRARIES USING OUTSIDE SUPPORT

OLIBRARIES NOT RESPONDING

| DEPT / LIBRARY TASK DESCRIPTION | NUMBER OF LIBRARIES USING OUTSIDE INDICATING SUPPORT FOR AVAILABLE THIS TASK | AVERAGE | ANNUAL VOLUME LOW HIGH | STD DF.V |
|--|--|---------|---------------------------|----------|
| CIRCULATION | | | | |
| 40. MAINTAINING RECORDS OF USERS BORROWING MATERIALS | 3 | 2 | 30963. | 11925. |
| 41. IDENTIFICATION OF CIRCULATING MATERIALS | 2 | 1 | 99999. | 99999. |
| 42. PLACING HOLDS ON CIRCULATING MATERIALS FOR USERS | 1 | 1 | 4977. | 4977. |
| 43. NOTIFYING USERS OF THE STATUS OF THEIR HOLDS | 0 | 0 | 0. | 0. |
| 44. NOTIFYING USERS OF OVERDUE MATERIALS | 2 | 1 | 12295. | 12295. |
| 45. COMPUTING FINES FOR OVERDUE MATERIALS | 1 | 1 | 36881. | 36881. |
| 46. BILLING USERS FOR OVERDUE MATERIALS | 1 | 1 | 12294. | 12294. |
| 47. PRODUCING PERIODIC CIRCULATION VOLUME STATISTICS | 2 | 1 | 276. | 276. |
| 48. PRODUCING CIRCULATION COST STATISTICS | 0 | 0 | 0. | 0. |
| 49. OTHER CIRCULATION PRODUCTS | 4 | 3 | 2527. | 40. |
| REFERENCE | | | 6000. | 2531. |
| 50. DATA BASE SEARCHES UPON REQUEST | 6 | 5 | 2397. | 33. |
| 51. PERIODIC, ON-GOING SEARCHES | 5 | 4 | 944. | 33. |
| 52. PRODUCING PRINTED CITATIONS | 6 | 4 | 51538. | 33. |
| 53. BILLING FOR DATA BASE SERVICES | 3 | 2 | 197. | 33. |
| 54. PRODUCTION OF USE STATISTICS | 2 | 2 | 19. | 4. |
| 55. PRODUCTION OF COST STATISTICS | 1 | 1 | 33. | 33. |
| 56. OTHER REFERENCE PRODUCTS (SPECIFY) | 2 | 1 | 99. | 99. |
| OTHER LIBRARY FUNCTION | | | | |
| 57. OTHER FUNCTIONS, TASKS, OR PRODUCTS | 1 | 1 | 35000. | 35000. |

A: SURVEY OF 100 LIBRARIES. LARGE ACADEMIC STRATUM

TABLE III: PROCESSING AND REFERENCE SUPPORT

10 LIBRARIES INCLUDED
 1 LIBRARIES USING NO OUTSIDE SUPPORT
 9 LIBRARIES USING OUTSIDE SUPPORT
 0 LIBRARIES NOT RESPONDING

| DEPT / LIBRARY TASK | DESCRIPTION | NUMBER OF LIBRARIES USING OUTSIDE SUPPORT FOR THIS TASK | INDICATING AVAILABLE TASK DATA | AVERAGE | LOW | HIGH | ANNUAL COST \$ | STD DEV |
|---|-------------|---|--------------------------------------|---------|--------|--------|----------------|---------|
| ACQUISITIONS | | | | | | | | |
| 1. SEARCHING FOR NEW TITLES | | | | | | | | |
| 2. CHECKING THAT TITLES ARE NOT IN LIBRARY | 3 | 2 | 6956. | 3908. | 10000. | 3046. | | |
| 3. CHECKING THAT TITLES ARE NOT BACK- ORDERED | 0 | 0 | 0. | 0. | 0. | 0. | | |
| 4. PRODUCING ORDERS FOR MATERIALS | 1 | 1 | 300. | 300. | 300. | 0. | | |
| 5. PRODUCING CLAIM/CANCEL NOTICES | 4 | 1 | 8000. | 8000. | 8000. | 0. | | |
| 6. ENCUMBRANCE OF BUDGETED FUNDS | 3 | 0 | 0. | 0. | 0. | 0. | | |
| 7. PRODUCING PAYMENTS TO VENDORS OR SUPPLIERS | 0 | 0 | 0. | 0. | 0. | 0. | | |
| 8. PRODUCING LISTS OF NEW ACQUISITIONS | 2 | 1 | 5000. | 5000. | 5000. | 0. | | |
| 9. PERIODIC STATISTICS ON ACQUISITIONS | 1 | 0 | 0. | 0. | 0. | 0. | | |
| 10. OTHER ACQUISITION PRODUCTS | 3 | 2 | 9808. | 7615. | 12000. | 2193. | | |
| CATALOGING | | | | | | | | |
| 11. VERIFICATION THAT ITEM IS NOT CATALOGED | | | | | | | | |
| 12. SEARCHING FOR CATALOGING DATA | 5 | 0 | 0. | 0. | 0. | 0. | | |
| 13. PRODUCING CATALOGING COPY | 6 | 1 | 35740. | 35740. | 35740. | 0. | | |
| 14. PRODUCTION OF CATALOG CARDS | 5 | 2 | 27550. | 5100. | 50000. | 22450. | | |
| 15. PRODUCTION OF BOOK CATALOG | 0 | 0 | 0. | 0. | 0. | 0. | | |
| 16. PRODUCTION OF MICROFORM CATALOG | 0 | 0 | 0. | 0. | 0. | 0. | | |
| 17. PRODUCTION OF SHELF PREPARATION MATERIALS | 1 | 0 | 0. | 0. | 0. | 0. | | |
| 18. CATALOG AUTHORITY CONTROL | 2 | 0 | 0. | 0. | 0. | 0. | | |
| 19. PRODUCING SPECIALIZED BIBLIOGRAPHIES | 1 | 1 | 3000. | 3000. | 3000. | 0. | | |
| 20. PRODUCING CATALOGING VOLUME STATISTICS | 3 | 0 | 0. | 0. | 0. | 0. | | |
| 21. PRODUCING CATALOGING COST STATISTICS | 0 | 0 | 0. | 0. | 0. | 0. | | |
| 22. OTHER CATALOGING PRODUCTS | 4 | 2 | 10125. | 250. | 20000. | 9875. | | |

A: SURVEY OF 100 LIBRARIES. LARGE ACADEMIC STRATUM

TABLE III: PROCESSING AND REFERENCE SUPPORT

10 LIBRARIES INCLUDED

1 LIBRARIES USING NO OUTSIDE SUPPORT

9 LIBRARIES USING OUTSIDE SUPPORT

0 LIBRARIES NOT RESPONDING

| DEPT / LIBRARY TASK DESCRIPTION | NUMBER OF LIBRARIES USING OUTSIDE SUPPORT FOR THIS TASK | INDICATING AVAILABLE TASK DATA | AVERAGE | LOW | ANNUAL COST, \$ HIGH | STD DEV |
|---|--|--------------------------------------|---------|--------|----------------------------|---------|
| INTER - LIBRARY LOAN | | | | | | |
| 23. VERIFICATION OF BIBLIOGRAPHIC INFORMATION | 3 | 0 | 0* | 0* | 0* | 0* |
| 24. LOCATING HOLDING LIBRARIES | 4 | 1 | 2500* | 2500* | 2500* | 0* |
| 25. COMMUNICATING ILL REQUESTS TO LIBRARIES | 1 | 0 | 0* | 0* | 0* | 0* |
| 26. MONITORING STATUS OF ILL REQUESTS | 1 | 0 | 0* | 0* | 0* | 0* |
| 27. PAYING FOR ILL SERVICES | 2 | 0 | 0* | 0* | 0* | 0* |
| 28. CHECKING AVAILABILITY OF TITLES IN YOUR LIBRARY | 0 | 0 | 0* | 0* | 0* | 0* |
| 29. MONITORING THE STATUS OF LOANS | 0 | 0 | 0* | 0* | 0* | 0* |
| 30. BILLING FOR ILL SERVICES | 0 | 0 | 0* | 0* | 0* | 0* |
| 31. PERIODIC ILL STATISTICS | 1 | 1 | 1800* | 1800* | 1800* | 0* |
| 32. OTHER ILL PRODUCTS (SPECIFY) | 2 | 2 | 10457* | 8191* | 12722* | 2266* |
| SERIALS | | | | | | |
| 33. CLAIMING OF LATE PERIODICAL ISSUES | 1 | 0 | 0* | 0* | 0* | 0* |
| 34. CANCELLING OF PERIODICAL SUBSCRIPTIONS | 0 | 0 | 0* | 0* | 0* | 0* |
| 35. RENEWAL OF PERIODICAL SUBSCRIPTIONS | 1 | 0 | 0* | 0* | 0* | 0* |
| 36. CONTROLLING OF PERIODICAL BINDING OPERATIONS | 0 | 0 | 0* | 0* | 0* | 0* |
| 37. SERIALS CHECK-IN OF ISSUES | 3 | 1 | 18000* | 18000* | 18000* | 0* |
| 38. PAYING FOR EXISTING PERIODICAL SUBSCRIPTIONS | 2 | 0 | 0* | 0* | 0* | 0* |
| 39. OTHER SERIALS-ORIENTED PRODUCTS | 7 | 2 | 23000* | 16000* | 30000* | 7000* |

A: SURVEY OF 100 LIBRARIES* LARGE ACADEMIC STRATUM

TABLE III: PROCESSING AND REFERENCE SUPPORT

1 LIBRARIES INCLUDED
9 LIBRARIES USING NO OUTSIDE SUPPORT
9 LIBRARIES USING OUTSIDE SUPPORT
0 LIBRARIES NOT RESPONDING

| DEPT / LIBRARY TASK DESCRIPTION | NUMBER OF LIBRARIES USING OUTSIDE SUPPORT FOR THIS TASK | INDICATING AVAILABLE TASK DATA | ANNUAL COST** | | | STD DEV |
|---|---|--------------------------------------|---------------|-------|--------|---------|
| | | | AVERAGE | LOW | HIGH | |
| CIRCULATION | | | | | | |
| 40. MAINTAINING RECORDS OF USERS BORROWING MATERIALS | 3 | 1 | 7597. | 7597. | 7597. | 0* |
| 41. IDENTIFICATION OF CIRCULATING MATERIALS | ? | 1 | 7597. | 7597. | 7597. | 0* |
| 42. PLACING HOLDS ON CIRCULATING MATERIALS FOR USERS | 1 | 1 | 7597. | 7597. | 7597. | 0* |
| 43. NOTIFYING USERS OF THE STATUS OF THEIR HOLDS | 0 | 0 | 0* | 0* | 0* | 0* |
| 44. NOTIFYING USERS OF OVERDUE MATERIALS | 2 | 1 | 7597. | 7597. | 7597. | 0* |
| 45. COMPUTING FINES FOR OVERDUE MATERIALS | 1 | 1 | 7597. | 7597. | 7597. | 0* |
| 46. BILLING USERS FOR OVERDUE MATERIALS | 1 | 1 | 7597. | 7597. | 7597. | 0* |
| 47. PRODUCING PERIODIC CIRCULATION VOLUME STATISTICS | 2 | 1 | 7597. | 7597. | 7597. | 0* |
| 48. PRODUCING CIRCULATION COST STATISTICS | 0 | 0 | 0* | 0* | 0* | 0* |
| 49. OTHER CIRCULATION PRODUCTS | 4 | 3 | 31884. | 360. | 72500. | 30145. |
| REFERENCE | | | | | | |
| 50. DATA BASE SEARCHES UPON REQUEST | 6 | 3 | 111978. | 4220. | 25000. | 9264. |
| 51. PERIODIC, ON-GOING SEARCHES | 5 | 2 | 4170. | 2000. | 6340. | 2170. |
| 52. PRODUCING PRINTED CITATIONS | 6 | 1 | 1139. | 1139. | 1139. | 0* |
| 53. BILLING FOR DATA BASE SERVICES | 3 | 1 | 282. | 282. | 282. | 0* |
| 54. PRODUCTION OF USE STATISTICS | 2 | 1 | 72. | 72. | 72. | 0* |
| 55. PRODUCTION OF COST STATISTICS | 1 | 0 | 0* | 0* | 0* | 0* |
| 56. OTHER REFERENCE PRODUCTS (SPECIFY) | 2 | 0 | 0* | 0* | 0* | 0* |
| OTHER LIBRARY FUNCTION | | | | | | |
| 57. OTHER FUNCTIONS, TASKS OR PRODUCTS | 1 | 1 | 6000. | 6000. | 6000. | 0* |

A: SURVEY OF 100 LIBRARIES. LARGE ACADEMIC STRATUM

TABLE III: PROCESSING AND REFERENCE SUPPORT
 LIBRARIES INCLUDED
 1 LIBRARIES USING NO OUTSIDE SUPPORT
 9 LIBRARIES USING OUTSIDE SUPPORT
 LIBRARIES NOT RESPONDING

| DEPT / LIBRARY TASK | DESCRIPTION | NUMBER OF LIBRARIES USING OUTSIDE SUPPORT FOR THIS TASK | INDICATING AVAILABLE TASK DATA | AVERAGE | ANNUAL COST PER VOLUME-\$ | STD DEV |
|--|-------------|---|--------------------------------------|---------|---------------------------|---------|
| ACQUISITIONS | | | | | | |
| 1. SEARCHING FOR NEW TITLES | 3 | 1 | 0.24 | 0.24 | 0.0 | 0.0 |
| 2. CHECKING THAT TITLES ARE NOT IN LIBRARY | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3. CHECKING THAT TITLES ARE NOT BACK- ORDERED | 1 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 4. PRODUCING ORDERS FOR MATERIALS | 4 | 1 | 0.11 | 0.11 | 0.0 | 0.0 |
| 5. PRODUCING CLAIM/CANCEL NOTICES | 2 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 6. ENCUMBRANCE OF BUDGETED FUNDS | 3 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 7. PRODUCING PAYMENTS TO VENDORS OR SUPPLIERS | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 8. PRODUCING LISTS OF NEW ACQUISITIONS | 2 | 1 | 125.00 | 125.00 | 0.0 | 0.0 |
| 9. PERIODIC STATISTICS ON ACQUISITIONS | 1 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 10. OTHER ACQUISITION PRODUCTS | 3 | 2 | 0.18 | 0.12 | 0.23 | 0.06 |
| CATALOGING | | | | | | |
| 11. VERIFICATION THAT ITEM IS NOT CATALOGED | 1 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 12. SEARCHING FOR CATALOGING DATA | 5 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 13. PRODUCING CATALOGING COPY | 6 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 14. PRODUCTION OF CATALOG CARDS | 5 | 1 | 2.00 | 2.00 | 0.0 | 0.0 |
| 15. PRODUCTION OF BOOK CATALOG | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 16. PRODUCTION OF MICROFORM CATALOG | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 17. PRODUCTION OF SHELF PREPARATION MATERIALS | 1 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 18. CATALOG AUTHORITY CONTROL | 2 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 19. PRODUCING SPECIALIZED BIBLIOGRAPHIES | 1 | 1 | 20.00 | 20.00 | 0.0 | 0.0 |
| 20. PRODUCING CATALOGING VOLUME STATISTICS | 3 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 21. PRODUCING CATALOGING COST STATISTICS | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 22. OTHER CATALOGING PRODUCTS | 4 | 1 | 3.33 | 3.33 | 0.0 | 0.0 |

A: SURVEY OF 100 LIBRARIES, LARGE ACADEMIC STRATUM

TABLE III: PROCESSING AND REFERENCE SUPPORT

10 LIBRARIES INCLUDED

1 LIBRARIES USING NO OUTSIDE SUPPORT

9 LIBRARIES USING OUTSIDE SUPPORT

9 LIBRARIES NOT RESPONDING

| DEPT / LIBRARY TASK DESCRIPTION | NUMBER OF LIBRARIES USING OUTSIDE SUPPORT FOR THIS TASK | INDICATING AVAILABLE TASK DATA | AVERAGE | ANNUAL COST PER VOLUME*\$ | STD DEV |
|---|--|--------------------------------------|---------|---------------------------|---------|
| | | | LOW | HIGH | |
| INTER - LIBRARY LOAN | | | | | |
| 23. VERIFICATION OF BIBLIOGRAPHIC INFORMATION | 3 | 0 | 0.0 | 0.0 | 0.0 |
| 24. LOCATING HOLDING LIBRARIES | 4 | 1 | 2.36 | 2.36 | 0.0 |
| 25. COMMUNICATING ILL REQUESTS TO LIBRARIES | 1 | 0 | 0.0 | 0.0 | 0.0 |
| 26. MONITORING STATUS OF ILL REQUESTS | 1 | 0 | 0.0 | 0.0 | 0.0 |
| 27. PAYING FOR ILL SERVICES | 2 | 0 | 0.0 | 0.0 | 0.0 |
| 28. CHECKING AVAILABILITY OF TITLES IN YOUR LIBRARY | 0 | 0 | 0.0 | 0.0 | 0.0 |
| 29. MONITORING THE STATUS OF LOANS | 0 | 0 | 0.0 | 0.0 | 0.0 |
| 30. BILLING FOR ILL SERVICES | 0 | 0 | 0.0 | 0.0 | 0.0 |
| 31. PERIODIC ILL STATISTICS | 1 | 1 | 150.00 | 150.00 | 0.0 |
| 32. OTHER ILL PRODUCTS (SPECIFY) | 2 | 2 | 10.43 | 2.85 | 7.58 |
| SERIALS | | | | | |
| 33. CLAIMING OF LATE PERIODICAL ISSUES | 1 | 0 | 0.0 | 0.0 | 0.0 |
| 34. CANCELLING OF PERIODICAL SUBSCRIPTIONS | 0 | 0 | 0.0 | 0.0 | 0.0 |
| 35. RENEWAL OF PERIODICAL SUBSCRIPTIONS | 1 | 0 | 0.0 | 0.0 | 0.0 |
| 36. CONTROLLING OF PERIODICAL BINDING OPERATIONS | 0 | 0 | 0.0 | 0.0 | 0.0 |
| 37. SERIALS CHECK-IN OF ISSUES | 3 | 1 | 0.23 | 0.23 | 0.0 |
| 38. PAYING FOR EXISTING PERIODICAL SUBSCRIPTIONS | 2 | 0 | 0.0 | 0.0 | 0.0 |
| 39. OTHER SERIALS-ORIENTED PRODUCTS | 7 | 0 | 0.0 | 0.0 | 0.0 |

A: SURVEY OF 100 LIBRARIES. LARGE ACADEMIC STRATUM

TABLE III: PROCESSING AND REFERENCE SUPPORT

10 LIBRARIES INCLUDED
 1 LIBRARIES USING NO OUTSIDE SUPPORT
 9 LIBRARIES USING OUTSIDE SUPPORT
 9 LIBRARIES NOT RESPONDING

| DEPT / LIBRARY TASK DESCRIPTION | NUMBER OF LIBRARIES USING OUTSIDE SUPPORT FOR THIS TASK | INDICATING AVAILABLE TASK DATA | AVERAGE | ANNUAL COST PER VOLUME*, \$ | | STD DEV |
|--|--|--------------------------------------|---------|-----------------------------|--------|---------|
| | | | | LOW | HIGH | |
| CIRCULATION | | | | | | |
| 40. MAINTAINING RECORDS OF USERS | 3 | 1 | 0.64 | 0.64 | 0.64 | 0.0 |
| 41. BORROWING MATERIALS | 2 | 1 | 0.08 | 0.08 | 0.08 | 0.0 |
| 41. IDENTIFICATION OF CIRCULATING MATERIALS | | | | | | |
| 42. PLACING HOLDS ON CIRCULATING MATERIALS FOR USERS | 1 | 1 | 1.53 | 1.53 | 1.53 | 0.0 |
| 43. NOTIFYING USERS OF THE STATUS OF THEIR HOLDS | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 44. NOTIFYING USERS OF OVERDUE MATERIALS | 2 | 1 | 0.62 | 0.62 | 0.62 | 0.0 |
| 45. COMPUTING FINES FOR OVERDUE MATERIALS | 1 | 1 | 0.21 | 0.21 | 0.21 | 0.0 |
| 46. BILLING USERS FOR OVERDUE MATERIALS | 1 | 1 | 0.62 | 0.62 | 0.62 | 0.0 |
| 47. PRODUCING PERIODIC CIRCULATION VOLUME STATISTICS | 2 | 1 | 27.53 | 27.53 | 27.53 | 0.0 |
| 48. PRODUCING CIRCULATION COST STATISTICS | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 49. OTHER CIRCULATION PRODUCTS | 4 | 2 | 284.92 | 0.06 | 569.77 | 284.86 |
| REFERENCE | | | | | | |
| 50. DATA BASE SEARCHES UPON REQUEST | 6 | 3 | 7.39 | 4.85 | 9.51 | 1.93 |
| 51. PERIODIC, ON-GOING SEARCHES | 5 | 2 | 14.80 | 2.92 | 26.67 | 11.87 |
| 52. PRODUCING PRINTED CITATIONS | 6 | 1 | 0.01 | 0.01 | 0.01 | 0.0 |
| 53. BILLING FOR DATA BASE SERVICES | 3 | 1 | 0.78 | 0.78 | 0.78 | 0.0 |
| 54. PRODUCTION OF USE STATISTICS | 2 | 1 | 18.00 | 18.00 | 18.00 | 0.0 |
| 55. PRODUCTION OF COST STATISTICS | 1 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 56. OTHER REFERENCE PRODUCTS (SPECIFY) | 2 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| OTHER LIBRARY FUNCTION | | | | | | |
| 57. OTHER FUNCTIONS, TASKS, OR PRODUCTS | 1 | 1 | 0.17 | 0.17 | 0.17 | 0.0 |

A: SURVEY OF 100 LIBRARIES. LARGE ACADEMIC STRATUM
 TABLE IV: UNIQUE COMPUTER SUPPORT
 10 LIBRARIES INCLUDED

| SYSTEM FUNCTION | NUMBER OF LIBRARIES REPORTING | COST OF DEVELOPMENT | | STD DEV | NUMBER OF LIBRARIES REPORTING | COST OF ANNUAL MAINTENANCE | | STD DEV |
|-------------------------|-------------------------------------|------------------------|--------|---------|-------------------------------------|-------------------------------|--------|---------|
| | | LOW | HIGH | | | AVERAGE | HIGH | |
| CIRCULATION | 2 | 22653. | 500. | 44805. | 22152. | 4 | 45609. | 500. |
| ACQUISITIONS | 2 | 8000. | 1000. | 15000. | 7000. | 4 | 40021. | 7615. |
| INTER - LIBRARY LOAN | 1 | 1000. | 1000. | 1000. | 0. | 1 | 500. | 500. |
| SERIALS | 2 | 12000. | 12000. | 12000. | 0. | 4 | 30755. | 3060. |
| INVENTORY CONTROL | 0 | 0. | 0. | 0. | 0. | 1 | 6000. | 87000. |
| CATALOGING | 0 | 0. | 0. | 0. | 0. | 0 | 0. | 0. |
| PROCESSING | 0 | 0. | 0. | 0. | 0. | 0 | 0. | 0. |
| ACCOUNTING | 0 | 0. | 0. | 0. | 0. | 2 | 12490. | 980. |
| | | | | | | | 24000. | 11510. |

A: SURVEY OF 100 LIBRARIES
 TABLE V: EQUIPMENT AND COMMUNICATIONS COSTS
 10 LIBRARIES INCLUDED

| EQUIPMENT CATALOGUE | NUMBER OF LIBRARIES REPORTING | AVERAGE | LOW | ANNUAL COSTS HIGH | STD DEV |
|-----------------------------------|-------------------------------------|---------|--------|----------------------|---------|
| 1. COPYING | 2 | \$1644* | 5000* | 140846* | 63056* |
| 2. TELEX | 0 | 0* | 0* | 0* | 0* |
| 3. TELETYPE, TWX | 7 | 2209* | 850* | 3000* | 651* |
| 4. DATATEL | 1 | 1046* | 1046* | 1046* | 0* |
| 5. OTHER TELETYPE SERVICE | 0 | 0* | 0* | 0* | 0* |
| 6. FAX | 0 | 0* | 0* | 0* | 0* |
| 7. DATAPHONE | 1 | 1200* | 1200* | 1200* | 0* |
| 8. CRT | 4 | 1038* | 240* | 37560* | 15729* |
| 9. LINE CHARGES TO COMPUTER | 1 | 500* | 500* | 500* | 0* |
| 10. TELEPHONE OTHER THAN ABOVE | 9 | 10656* | 615* | 24572* | 7287* |
| 11. OTHER COMMUNICATIONS COSTS | 2 | 1198* | 185* | 2211* | 1013* |
| 12. TOTAL | 10 | 62553* | 14464* | 194646* | 60725* |

A SURVEY OF 100 LIBRARIES | ABGF Academic Status

TABLE VI: BUDGET AND EXPENDITURE PATTERNS: DEPARTMENTAL ALLOCATIONS TO LIBRARIES INCLUDED

| CATEGORy | NUMBER OF LIBRARIES REPORTING | PERCENT ALLOCATED TO: | | STD DEV | PERCENT ALLOCATED TO: ACQUISITIONS AVERAGE | STD DEV |
|--------------------------------|-------------------------------|-----------------------|--------|---------|--|---------|
| | | AVERAGE | HIGH | | | |
| TOTAL | 10 | 9.02% | 3.31% | 19.18% | 4.07 | 9 |
| SERIALIZED AND PRInCE BENEFITS | 10 | 9.17% | 3.55% | 18.48% | 3.71 | 9 |
| AUTOMATED SYSTEMS | 1 | 15.26% | 15.26% | 15.26% | 0.0 | 1 |
| OTHER SUPPORT SERVICES | 4 | 12.16% | 3.33% | 31.55% | 11.53 | 3 |
| EQUIPMENT RENTAL | 3 | 59.91% | 9.98% | 92.00% | 35.78 | 0 |
| COMMUNICATIONS | 4 | 35.98% | 11.00% | 100.00% | 37.04 | 3 |
| SUPPLIES | 4 | 3.87% | 2.43% | 5.66% | 1.19 | 5 |
| OTHER OPERATING | 1 | 6.18% | 6.18% | 6.18% | 0.0 | 1 |
| TOTAL LIBRARY BUDGET | 10 | 5.33% | 1.04% | 12.19% | 3.16 | 9 |

A: SURVEY OF 100 LIBRARIES. LARGE ACADEMIC STRATUM

TABLE VI: BUDGET AND EXPENDITURE PATTERNS: DEPARTMENTAL ALLOCATIONS
10 LIBRARIES INCLUDED

| BUDGET CATEGORY | NUMBER OF LIBRARIES REPORTING | PERCENT ALLOCATED TO: | | STD DEV | NUMBER OF LIBRARIES REPORTING | PERCENT ALLOCATED TO: | | STD DEV |
|---------------------------------|-------------------------------------|-----------------------|--------|---------|-------------------------------------|-----------------------|--------|---------|
| | | LOW | HIGH | | | AVERAGE | LOW | |
| TOTAL OPERATING | 9 | 15.68% | 7.97% | 19.98% | 4.24 | 9 | 6.38% | 2.89% |
| SALARIES AND FRINGE BENEFITS | 9 | 16.24% | 5.34% | 22.44% | 4.53 | 9 | 6.75% | 3.10% |
| AUTOMATED SYSTEMS | 3 | 51.35% | 11.59% | 86.59% | 30.79 | 2 | 34.01% | 31.20% |
| OTHER SUPPORT SERVICES | 3 | 17.93% | 3.52% | 28.21% | 10.49 | 3 | 7.44% | 1.03% |
| EQUIPMENT RENTAL | 3 | 43.48% | 8.20% | 100.00% | 40.37 | 0 | 0.0% | 0.0% |
| COMMUNICATIONS | 3 | 5.98% | 1.86% | 9.69% | 3.21 | 3 | 3.93% | 2.00% |
| SUPPLIES | 5 | 16.78% | 5.66% | 32.14% | 9.99 | 5 | 5.76% | 1.13% |
| OTHER OPERATING | 1 | 29.37% | 29.37% | 0.0 | 0.0 | 1 | 4.95% | 4.95% |
| TOTAL LIBRARY BUDGET | 9 | 8.99% | 2.45% | 14.80% | 4.19 | 9 | 3.83% | 0.86% |

A: SURVEY OF 100 LIBRARIES, LARGE

TABLE VI: BUDGET AND EXPENDITURE PATTERNS: DEPARTMENTAL ALLOCATIONS
ACADEMIC STRATUM

| BUDGET CATEGORIES | NUMBER OF LIBRARIES REPORTING | PERCENT ALLOCATED TO: | | | NUMBER OF LIBRARIES REPORTING | PERCENT ALLOCATED TO: | | |
|------------------------------|-------------------------------|-----------------------|--------|--------|-------------------------------|-----------------------|--------|-------|
| | | LOW | MEDIUM | HIGH | | AVERAGE | LOW | HIGH |
| TOTAL OPERATING | 9 | 1.98% | 1.14% | 3.25% | 0.62 | 9 | 4.22% | 1.10% |
| SALARIES AND PAYING BENEFITS | 9 | 2.03% | 1.23% | 3.06% | 0.54 | 9 | 3.76% | 1.14% |
| AUTOMATED SYSTEMS | 1 | 4.14% | 4.14% | 4.14% | 0.0 | 0 | 0.0% | 0.0% |
| OTHER SUPPORT SERVICES | 3 | 5.15% | 1.06% | 10.26% | 3.82 | 3 | 25.42% | 1.18% |
| EQUIPMENT RENTAL | 1 | 10.60% | 10.60% | 10.60% | 0.0 | 1 | 8.00% | 8.00% |
| COMMUNICATIONS | 3 | 10.10% | 1.30% | 18.56% | 7.05 | 3 | 2.20% | 0.97% |
| SUPPLIES | 4 | 2.57% | 1.26% | 5.66% | 1.81 | 5 | 14.53% | 3.64% |
| OTHER OPERATING | 2 | 2.93% | 1.23% | 4.64% | 1.70 | 1 | 3.25% | 3.25% |
| TOTAL LIBRARY BUDGET | 9 | 1.23% | 0.17% | 2.06% | 0.61 | 9 | 2.84% | 0.26% |

2.57

7.73%

2.07%

6.93

0.0

1.51

A SURVEY OF 100 LIBRARIES. LARGE ACADEMIC STRATUM

TABLE VII: REGIONAL LIBRARY SUMMARY

10 LIBRARIES INCLUDED

A: SERVICES PROVIDED BY REGIONAL LIBRARIES

| TYPE OF SERVICE | NUMBER IN THIS STRATUM PROVIDING REGIONAL SERVICE | NUMBER IN THIS STRATUM PROVIDING THIS SERVICE | PERCENT PROVIDING THIS SERVICE | |
|------------------------------|---|---|--------------------------------|------|
| ACQUISITIONS | | | | |
| 1. MAINTAIN STANDING ORDERS | 7 | 0 | 0.0% | |
| 2. PAYMENT PROCESSING | 7 | 0 | 0.0% | |
| 3. COLLECTION DEVELOPMENT | 7 | 0 | 0.0% | |
| 4. CLAIM BACKORDERED ITEMS | 7 | 0 | 0.0% | |
| 5. RETURNS | 7 | 0 | 0.0% | |
| 6. CANCELLATIONS | 7 | 0 | 0.0% | |
| 7. OTHER | 7 | 0 | 0.0% | |
| CATALOGING | | | | |
| 8. PRODUCE CARD SETS | 7 | 1 | 14.3% | |
| 9. PHYSICAL PROCESSING | 7 | 0 | 0.0% | |
| 10. PROVIDE CATALOGING COPY | 7 | 2 | 28.6% | |
| 11. PRODUCE CATALOGS | 7 | 1 | 14.3% | |
| 12. OTHER | 7 | 0 | 0.0% | |
| INFER - LIBRARY LOAN | | | | |
| 13. PROVIDE LOCATIONS | 7 | 3 | 42.9% | |
| 14. VERIFICATION | 7 | 4 | 57.1% | |
| 15. ACT AS SWITCHING CENTER | 7 | 4 | 57.1% | |
| 16. OTHER | 7 | 2 | 28.6% | |
| REFERENCE | | | | |
| 17. DATA BASE SEARCHES | 7 | 3 | 42.9% | |
| 18. REFERRAL SERVICES | 7 | 1 | 14.3% | |
| 19. OTHER | 7 | 2 | 28.6% | |
| OTHER | | | | |
| 20. MAINTAIN A UNION CATALOG | 7 | 1 | 14.3% | |
| 21. OTHER REGIONAL SERVICES | 7 | 0 | 0.0% | |
| NONE | 22. NO REGIONAL SERVICES | 7 | 0 | 0.0% |

A: SURVEY OF 100 LIBRARIES. LARGE ACADEMIC STRATUM

TABLE VII: REGIONAL LIBRARY SUMMARY

10 LIBRARIES INCLUDED

B: TYPES OF LIBRARIES SUPPORTED

| TYPE OF LIBRARY | NUMBER OF LIBRARIES REPORTING | AVERAGE | NUMBER OF LIBRARIES SUPPORTED | | STD DEV |
|--------------------|-------------------------------------|---------|----------------------------------|------|---------|
| | | | LOW | HIGH | |
| PUBLIC | 3 | 4.8 | 13. | 65. | 24.51 |
| ACADEMIC | 4 | 9. | 2. | 12. | 4.09 |
| SCHOOL | 2 | 99. | 99. | 99. | 0.0 |
| SPECIAL | 2 | 68. | 68. | 68. | 0.0 |
| TOTAL | 5 | 102. | 2. | 244. | 115.67 |

**99. INDICATES 99 OR MORE LIBRARIES SUPPORTED

A: SURVEY OF 100 LIBRARIES.

LARGE
ACADEMIC
STRATUMTABLE VII: REGIONAL LIBRARY SUMMARY
10 LIBRARIES INCLUDED
C: REGIONAL INTERLIBRARY LOAN

| REQUESTS | NUMBER OF LIBRARIES REPORTING | AVERAGE | VOLUME DURING THE LAST HIGH | STD DEV |
|---|-------------------------------|---------|-----------------------------|---------|
| TOTAL REQUESTS | 3 | 18472. | 2913. | 44850. |
| FILLED REQUESTS | 3 | 14132. | 961. | 37226. |
| FILL RATE | 3 | 57.% | 33.% | 83.% |
| % FILLED FROM LIBRARY | 3 | 57.% | 33.% | 92.% |
| % FILLED FROM ANOTHER LIBRARY | 1 | 1.% | 1.% | 1.% |
| % FORWARDED TO STAFF LIBRARY | 1 | 8.% | 8.% | 8.% |
| % FORWARDED TO LIBRARY OUTSIDE REGION | 2 | 12.% | 10.% | 13.% |
| % FORWARDED TO A BIBLIOGRAPHIC CENTER | 1 | 67.% | 67.% | 67.% |
| % RETURNED TO REQUESTER WITH LOCATION INFORMATION | 2 | 11.% | 2.% | 20.% |
| % RETURNED TO REQUESTER UNFULLED | 2 | 2% | 1.% | 3.% |
| % UNFULLED | 2 | 16.% | 5.% | 27.% |

A: SURVEY OF 100 LIBRARIES. LARGE

TABLE VII: REGIONAL LIBRARY SUMMARY

10 LIBRARIES INCLUDED

D: REGIONAL CATALOG MAINTENANCE

| | NUMBER OF LIBRARIES PROVIDING CATALOGS | AVERAGE | CATALOG SIZE•ETC. LOW | CATALOG SIZE•ETC. HIGH | STD DEV |
|---------------------|---|----------|--------------------------|---------------------------|---------|
| <hr/> | | | | | |
| TYPE OF HOLDINGS | | | | | |
| MONOGRAPH | 1 | | | | |
| SERIALS | 1 | | | | |
| OTHER | 0 | | | | |
| COMAINFN | 1 | | | | |
| <hr/> | | | | | |
| TITLES | 1 | 21362.00 | 21362.00 | 21362.00 | 0.0 |
| TITLES ADDED | 1 | 4272.00 | 4272.00 | 4272.00 | 0.0 |
| LOCATIONS | 1 | 17.00 | 17.00 | 17.00 | 0.0 |
| LOCATIONS P/P TITLE | 1 | 17.00 | 17.00 | 17.00 | 0.0 |
| YEARS IN EXISTENCE | 1 | 6.00 | 6.00 | 6.00 | 0.0 |

A: SURVEY OF 100 LIBRARIES. LARGE ACADEMIC STRATUM

TABLE VII: REGIONAL LIBRARY SUMMARY

10 LIBRARIES INCLUDED

E: REIMBURSEMENT
5 LIBRARIES RECEIVING REIMBURSEMENT

| CHARACTERISTICS OF REIMBURSEMENTS | NUMBER OF LIBRARIES RECEIVING | AVERAGE | AMOUNT LOW | HIGH | STD DEV |
|--------------------------------------|----------------------------------|----------|-------------------|----------|----------|
| <hr/> | | | | | |
| GENERAL | | | | | |
| SALARIES FOR HOS STAFF | 5 | 19650.00 | 2400.00 | 78871.00 | 29679.43 |
| ANNUAL SUPPLY SUPPLEMENT | 3 | 2902.67 | 908.00 | 6600.00 | 2617.13 |
| ANNUAL EQUIPMENT SUPPLMT | 1 | 50.00 | 50.00 | 50.00 | 0.0 |
| ANNUAL STIPEND | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| CATALOGING | | | | | |
| PER VOLUME PROCESSED | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PER CARD SET | 1 | 0.85 | 0.85 | 0.85 | 0.0 |
| PFR ENTRY IN CATALOG | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| ACQUISITIONS | | | | | |
| PER VOLUME ORDERED | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| INTER - LIBRARY LOAN | | | | | |
| PER FILLED REQUEST | 2 | 0.10 | 0.10 | 0.10 | 0.0 |
| PFR UNFILLED REQUEST | 1 | 0.50 | 0.50 | 0.50 | 0.0 |
| PFR REQUEST FOR LOC INFO | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| OTHER | 4 | 6019.75 | 53.00 | 20225.00 | 8260.59 |
| <hr/> | | | | | |
| SOURCE OF REIMBURSEMENT | NUMBER OF LIBRARIES RECEIVING | AVERAGE | PERCENTAGE LOW | HIGH | STD DEV |
| STATE LIBRARIES | 3 | 98.00% | 94.00% | 100.00% | 2.83 |
| PARTICIPATING LIBRARIES | 2 | 75.00% | 50.00% | 100.00% | 25.00 |
| OTHER | 4 | 63.50% | 6.00% | 99.00% | 38.76 |

A: SURVEY OF 100 LIBRARIES. LARGE
ACADEMIC LIBRARIES
TECHNICAL LIBRARIES DEPARTMENT
IN LIBRARIES INSTITUTE
A: LIBRARY PROFILE

| | NUMBER OF LIBRARIES REPORTING | DEPARTMENT LEVEL | DEPARTMENT HIGH | STAFF LEVEL | NUMBER OF LIBRARIES REPORTING | TECHNICAL LAST AVG. LOW | EXPERIENCE AVG. | STAFF LEVEL |
|---------------------------------|-------------------------------------|---------------------|--------------------|-------------|-------------------------------------|----------------------------------|--------------------|----------------|
| TOTAL OPERATING | 9 | 246225. | 19751. | 141236. | 90577. | 9 | 15679. | -47163. |
| SALARIES AND FRINGE BENEFITS | 9 | 239405. | 123551. | 381238. | 165379. | 9 | 13443. | -59025. |
| AUTOMATED SYSTEMS | 1 | 25300. | 25300. | 0. | 1 | 13000. | 13000. | 0. |
| OTHER SUPPORT SERVICES | 3 | 3970. | 1700. | 6504. | 1973. | 3 | 223. | 161. |
| EQUIPMENT FRENTAL | 0 | 0. | 0. | 0. | 0 | 0. | 0. | 0. |
| COMUNICATIONS | 3 | 1139. | 500. | 2077. | 674. | 3 | 119. | 107. |
| SUPPLIES | 5 | 3155. | 800. | 5476. | 1616. | 5 | -75. | -1136. |
| OTHER OPERATING | 1 | 470. | 470. | 0. | 1 | 106. | 106. | 0. |

A: SURVEY OF 100 LIBRARIES, LARGE

TABLE VIII: ACQUISITIONS DEPARTMENT
100 LIBRARIES INCLUDED
A: BUDGET PROFILE

| BUDGET CATEGORY | NUMBER OF LIBRARIES REPORTING | LAST YEAR'S EXPENDITURES | | STD DEV | NUMBER OF DEPARTMENTS | NUMBER OF LIBRARIES REPORTING | | STD DEV |
|---------------------------------|-------------------------------------|--------------------------|---------|---------|--------------------------|-------------------------------------|---------|---------|
| | | LOW | HIGH | | | AVERAGE | AVRANGE | |
| TOTAL OPERATING | 9 | 232288. | 477747. | 424653. | 96408. | 9 | 4084 | 2.61 |
| SALARIES AND FRINGE BENEFITS | 9 | 227512. | 91769. | 400015. | 93231. | 9 | 4.74 | 2.80 |
| AUTOMATED SYSTEMS | 2 | 6953. | 1605. | 12300. | 5344. | 2 | 0.19 | 0.04 |
| OTHER SUPPORT SERVICES | 3 | 3747. | 1468. | 6348. | 2005. | 3 | 0.10 | 0.06 |
| EQUIPMENT FURNITAL | 0 | 0. | 0. | 0. | 0. | 0 | 0.0 | 0.0 |
| COMMUNICATIONS | 3 | 1060. | 500. | 1446. | 634. | 1 | 0.03 | 0.02 |
| SUPPLIES | 5 | 3181. | 589. | 4856. | 1603. | 5 | 0.09 | 0.01 |
| OTHER OPERATING | 1 | 364. | 364. | 364. | 0. | 1 | 0.01 | 0.01 |

A: SURVEY OF 100 LIBRARIES, LARGE ACADEMIC STRATUM
 HALF VIII: ACQUISITIONS DEPARTMENT
 10 LIBRARIES INCLUDED
 P: STAFFING AND SALARY EXPENDITURES

| TYPE OF EMPLOYEE | NUMBER OF FTE REPORTED | VOLUME THROUGHPUT | | PER ACQ FTE | STD DEV | ANNUAL EXP FOR VOLUME | | THROUGHPUT STD DEV |
|-------------------------------|------------------------|-------------------|----------|-------------|----------|-----------------------|---------------------|--------------------|
| | | LOW | HIGH | | | ACQ AVERAGE | REPORTING LIBRARIES | |
| PROFESSIONAL LIBRARIAN | 36.60 | 12130.97 | 4300.29 | 52423.00 | 9308.44 | 10 | 1.52 | 0.33 |
| OTHER PROFESSIONAL | 1.00 | 30102.00 | 30102.00 | 30102.00 | .0.0 | 1 | 0.49 | 0.49 |
| LIBRARY ASSISTANT | 117.75 | 3770.61 | 1920.00 | 14866.56 | 1939.42 | 10 | 2.47 | 0.54 |
| CLERK | 28.50 | 9643.04 | 2400.00 | 47047.00 | 9000.17 | 7 | 1.09 | 0.22 |
| STUDENT / PAGE | 25.14 | 16640.09 | 6297.49 | 64756.97 | 15069.68 | 10 | 0.30 | 0.04 |
| OTHER | 2.00 | 43823.50 | 43047.00 | 44600.00 | 776.50 | 2 | 0.26 | 0.22 |
| STAFF PAID BY OUTSIDE SOURCES | 9.85 | 16632.68 | 5739.60 | 60948.00 | 20085.49 | 0 | 0.0 | 0.0 |
| VOLUNTEER | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| TOTAL | 220.84 | 2010.46 | 857.14 | 3185.71 | 194.50 | 10 | 5.16 | 2.65 |
| | | | | | | | 10.11 | 2.37 |

A: SURVEY OF 100 LIBRARIES. LARGE ACADEMIC STRATUM

TABLE VIII: ACQUISITIONS DEPARTMENT
10 LIBRARIES INCLUDED
R: STAFFING AND SALARY EXPENDITURES

| TYPE OF EMPLOYEE | NUMBER OF LIBRARIES REPORTING | FULL TIME EQUIVALENCES | | | STD DEV | ANNUAL SALARY EXPENDITURES, \$ | STD DEV | | |
|-------------------------------|-------------------------------|------------------------|------|---------|---------|--------------------------------|---------|---------|---------|
| | | LOW | HIGH | AVERAGE | | | | | |
| PROFESSIONAL LIBRARIAN | 10 | 3.66 | 1.00 | 7.00 | 1.68 | 10 | 56174. | 104532. | 27764. |
| OTHER PROFESSIONAL | 1 | 1.00 | 1.00 | 0.00 | 0.0 | 1 | 14820. | 14820. | 0. |
| LIBRARY ASSISTANT | 10 | 11.77 | 3.00 | 22.00 | 5.91 | 10 | 107880. | 24228. | 214680. |
| CLERK | 7 | 4.07 | 1.00 | 8.50 | 2.68 | 7 | 29912. | 6448. | 70500. |
| STUDENT / PAGE | 9 | 2.79 | 0.75 | 6.00 | 1.87 | 10 | 11309. | 1010. | 28431. |
| OTHER | 2 | 1.00 | 1.00 | 1.00 | 0.0 | 2 | 11355. | 9822. | 12888. |
| STAFF PAID BY OUTSIDE SOURCES | 3 | 3.28 | 1.10 | 7.50 | 2.98 | 0 | 0. | 0. | 0. |
| VOLUNTEER | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0. | 0. | 0. |

| TYPE OF EMPLOYEE | NUMBER OF FTE REPORTED | AVERAGE SALARY PEP FTE | | | STD DEV |
|------------------------|------------------------|------------------------|--------|---------|---------|
| | | LOW | HIGH | AVERAGE | |
| PROFESSIONAL LIBRARIAN | 36.60 | 15348. | 10738. | 18220. | 1703. |
| OTHER PROFESSIONAL | 1.00 | 14820. | 14820. | 14820. | 0. |
| LIBRARY ASSISTANT | 117.75 | 9162. | 6760. | 10407. | 1090. |
| CLERK | 28.50 | 7347. | 5421. | 9396. | 1039. |
| STUDENT / PAGE | 25.14 | 4458. | 1748. | 7345. | 1675. |
| OTHER | 2.00 | 11355. | 9822. | 12888. | 1533. |

A: SURVEY OF 100 LIBRARIES. LARGE ACADEMIC STRATUM
 TABLE VIII: ACQUISITIONS DEPARTMENT
 C: ORDERING PATTERNS
 10 LIBRARIES INCLUDED

| MATERIAL TYPE AND/OR SOURCE | NUMBER OF LIBRARIES REPORTING | TOTAL THROUGHPUT | | STD DEV |
|---|-------------------------------------|------------------|--------|---------|
| | | AVERAGE | HIGH | |
| MONOGRAPH TITLES | 10 | 37552* | 11800* | 66185* |
| SERIAL TITLES | 9 | 760* | 200* | 22592* |
| TOTAL TITLES | 10 | 44399* | 12000* | 18171* |
| % STANDING ORDER | 10 | 7.* | 1.* | 20.* |
| % APPROVAL PLAN | 10 | 21.* | 5.* | 36.* |
| % ORDER REQUEST | 10 | 54.* | 38.* | 10.* |
| % GIFT/EXCHANGE | 10 | 15.* | 5.* | 66.* |
| % OTHER | 4 | 6.* | 1.* | 32.* |
| YEAR IMPRINT | | | | |
| * 1975-76 | 9 | 57.* | 10.* | 85.* |
| * 1969-74 | 9 | 30.* | 4.* | 80.* |
| * PRE1969 | 8 | 7.* | 1.* | 15.* |
| BACKFILE AND RETROSPECTIVE | | | | |
| * SERIAL BACKFILE SUPPLEMENT | 6 | 51.8* | 1.0* | 99.0* |
| * MONOGRAPH RETROSPECTIVE COLLECTION DEVELOPMENT | 6 | 24.2* | 1.0* | 50.0* |

A: SURVEY OF 100 LIBRARIES. LARGE ACADEMIC STRATUM

**TABLF IX: CATALOGING DEPARTMENT
10 LIBRARIES INCLUDED
A: BUDGET PROFILE**

| BUDGET CATEGORY | NUMBER OF LIBRARIES REPORTING | AVERAGE | DEPARTMENT LOW | DEPARTMENT HIGH | STD DEV | NUMBER OF LIBRARIES REPORTING | INCREASE AVERAGE | OVER LAST YEAR'S HIGH | LAST YEAR'S LOW | EXPENDITURES STD DEV |
|------------------------------|-------------------------------|---------|----------------|-----------------|---------|-------------------------------|------------------|-----------------------|-----------------|----------------------|
| TOTAL OPERATING | 9 | 513694. | 118991. | 1291198. | 334884. | 9 | 58945. | 13656. | 101727. | 24818. |
| SALARIES AND FRINGE BENEFITS | 9 | 495528. | 114391. | 1291198. | 341245. | 9 | 48672. | 12299. | 101727. | 31813. |
| AUTOMATED SYSTEMS | 3 | 31213. | 7800. | 50000. | 17536. | 0 | 0. | 0. | 0. | 0. |
| OTHER SUPPORT SERVICES | 3 | 8587. | 1700. | 18562. | 7222. | 3 | -1488. | -3410. | 240. | 1496. |
| EQUIPMENT RENTAL | 3 | 2157. | 600. | 3900. | 1354. | 3 | -1711. | -5153. | 563. | 2475. |
| COMMUNICATIONS | 3 | 1125. | 300. | 2500. | 979. | 3 | 105. | 40. | 170. | 65. |
| SUPPLIES | 5 | 6659. | 1790. | 17985. | 5863. | 5 | -445. | -1708. | 1342. | 1032. |
| OTHER OPERATING | 1 | 950. | 950. | 0. | 1 | 153. | 153. | 153. | 0. | |

A: SURVEY OF 100 LIBRARIES* LARGE ACADEMIC STRATUM

TABLE IX: CATALOGING DEPARTMENT
10 LIBRARIES INCLUDED
R: STAFFING AND SALARY EXPENDITURES

| TYPE OF EMPLOYEE | NUMBER OF LIBRARIES REPORTING | FULL TIME EQUIVALENCES | | STD DEV | ANNUAL SALARY EXPENDITURES, \$ | | | STD DEV |
|-------------------------------|-------------------------------|------------------------|------|---------|--------------------------------|-------------------------------|---------|---------|
| | | LOW | HIGH | | AVERAGE | NUMBER OF LIBRARIES REPORTING | LOW | |
| PROFESSIONAL LIBRARIAN | 10 | 11.09 | 5.00 | 17.00 | 4.28 | 10 | 177396* | 78447* |
| OTHER PROFESSIONAL | 1 | 0.50 | 0.50 | 0.50 | 0.0 | 1 | 3229* | 3229* |
| LIBRARY ASSISTANT | 10 | 24.21 | 2.00 | 75.00 | 20.61 | 10 | 224517* | 726649* |
| CLERK | 5 | 7.60 | 2.00 | 16.00 | 4.96 | 5 | 40981* | 13288* |
| STUDENT / PAGE | 9 | 4.19 | 1.00 | 8.00 | 2.25 | 9 | 20052* | 4576* |
| OTHER | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0* | 0* |
| STAFF PAID BY OUTSIDE SOURCES | 3 | 2.86 | 0.74 | 7.00 | 2.93 | 0 | 0* | 0* |
| VOLUNTEER | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0* | 0* |

| TYPE OF EMPLOYEE | NUMBER OF FTE REPORTED | AVERAGE SALARY PER FTE | | STD DEV |
|------------------------|------------------------|------------------------|--------|---------|
| | | LOW | HIGH | |
| PROFESSIONAL LIBRARIAN | 110.87 | 16000* | 11675* | 31533* |
| OTHER PROFESSIONAL | 0.50 | 6458* | 6458* | 0* |
| LIBRARY ASSISTANT | 242.15 | 9272* | 6590* | 11328* |
| CLERK | 38.00 | 5392* | 4938* | 6644* |
| STUDENT / PAGE | 37.73 | 4793* | 3837* | 5907* |
| OTHER | 0.0 | 0* | 0* | 681* |

A: SURVEY OF 100 LIBRARIES, LARGE
 TABLE IX: CATALOGING DEPARTMENT
 10 LIBRARIES INCLUDED
 A: BUDGET PROFILE

| BUDGET CATEGORY | NUMBER OF LIBRARIES REPORTING | LAST YEAR'S EXPENDITURES | | STD DEV | NUMBER OF LIBRARIES REPORTING | AVERAGE | EXPENDITURE PER THROUHPUT | STD DEV | | |
|---------------------------------|-------------------------------------|--------------------------|---------|----------|-------------------------------------|---------|---------------------------|---------|-------|------|
| | | LOW | HIGH | | | | LOW | | | |
| TOTAL OPERATING | 9 | 46129* | 105335* | 1189471* | 309436* | 9 | 11.76 | 6.28 | 17.74 | 3.92 |
| SALARIES AND FRINGE BENEFITS | 9 | 452264* | 100885* | 1189471* | 310855* | 9 | 11.53 | 6.12 | 17.74 | 4.01 |
| AUTOMATED SYSTEMS | 0 | 0* | 0* | 0* | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| OTHER SUPPORT SERVICES | 3 | 10075* | 1460* | 19856* | 7555* | 3 | 0.35 | 0.10 | 0.47 | 0.14 |
| EQUIPMENT RENTAL | 3 | 3869* | 1144* | 7125* | 2471* | 3 | 0.09 | 0.03 | 0.24 | 0.08 |
| COMMUNICATIONS | 3 | 1055* | 300* | 2330* | 907* | 3 | 0.04 | 0.02 | 0.06 | 0.02 |
| SUPPLIES | 5 | 7104* | 2690* | 16643* | 5126* | 5 | 0.19 | 0.10 | 0.40 | 0.11 |
| OTHER OPERATING | 1 | 797* | 797* | 0* | 1 | 0.03 | 0.03 | 0.04 | 0.0 | |

A: SURVEY OF 100 LIBRARIES, LARGE ACADEMIC STRATUM
 TABLE IY: CATALOGING DEPARTMENTAL EXPENDITURES INCLUDED
 10 LIBRARIES INCLUDED
 B: STAFFING AND SALARY EXPENDITURES

| TYPE OF EMPLOYEE | NUMBER OF FTE REPORTED | TITLE AVERAGE | THROUGHPUT LOW | PER CAT FTE HIGH | STD DEV | NUMBER OF LIBRARIES REPORTING | ANNUAL AVERAGE | CAT SAL \$ | EXP PER TITLE | ANNUAL THROUGHPUT STD DEV |
|-------------------------------|------------------------|---------------|----------------|------------------|----------|-------------------------------|----------------|------------|---------------|---------------------------|
| | | | | | | | | LOW | HIGH | STD DEV |
| PROFESSIONAL LIBRARIAN | 110.87 | 3435.30 | 2731.81 | 5087.75 | .336.42 | 10 | 4.90 | 2.74 | 7.77 | 1.66 |
| OTHER PROFESSIONAL | 0.50 | 70378.00 | 70378.00 | 70378.00 | 0.0 | 1 | 0.09 | 0.09 | 0.09 | 0.0 |
| LIBRARY ASSISTANT | 242.15 | 1600.34 | 947.17 | 14929.66 | 1672.10 | 10 | 5.24 | 0.56 | 10.26 | 3.27 |
| CLERK | 39.00 | 3825.00 | 2799.31 | 7351.00 | 1266.02 | 5 | 1.30 | 0.90 | 1.76 | 0.33 |
| STUDENT / PAGE | 37.73 | 9881.30 | 3658.25 | 34593.00 | 6225.38 | 9 | 0.54 | 0.13 | 1.30 | 0.36 |
| OTHER | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| STAFF PAID BY OUTSIDE SOURCES | 8.59 | 14196.96 | 5996.29 | 60525.67 | 17689.62 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| VOLUNTEER | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| TOTAL | 437.84 | 885.08 | 650.50 | 1633.56 | 214.66 | 10 | 11.28 | 5.78 | 17.65 | 3.85 |

A: SURVEY OF 100 LIBRARIES. LARGE ACADEMIC STRATUM

TABLE IX: CATALOGING DEPARTMENT,
C: CATALOGING PATTERNS
10 LIBRARIES INCL INFO

| TYPE OF MATERIAL | NUMBER OF LIBRARIES REPORTING | AVERAGE | NUMBER OF | | |
|------------------|-------------------------------|---------|-----------|--------|---------|
| | | | LOW | HIGH | STN NFW |
| MONOGRAPH TITLES | 10 | 33070. | 13723. | 5387. | 12163.3 |
| SERIALS TITLES | 10 | 2524. | 853. | 8600. | 2346.9 |
| OTHER TITLES | 8 | 3949. | 119. | 15248. | 5064.4 |
| TOTAL TITLES | 10 | 38752. | 14707. | 71038. | 15808.7 |

| CATALOGING SOURCE | RELATED DATA | | |
|--------------------|--------------|---------|-------------------------|
| | LAG TIME | BACKLOG | CARDS/RECORD ENTRY FOR: |
| ¶ LC CAT | 10 | 33. | 4. |
| ¶ NIUC DATA | 7 | 8.8 | 1.8 |
| ¶ CIP DATA | 4 | 1.8 | 1.8 |
| % SECONDARY SOURCE | 6 | 34.8 | 5.8 |
| § ORIG CATALOGING | 9 | 16.8 | 5.8 |

PROOF SLIP SUBSCRIPTIONS
9 LIBRARIES RESPONDING
4 AFFIRMATIVE OR 44.4%
5 NEGATIVE
0 OTHER RESPONSE

A: SURVEY OF 100 LIBRARIES. LARGE
B: INFRASTRUCTURE LOAN DEPARTMENT
IN LIBRARIES INCLUDED
A: PROJECT PROFILE

| BUDGET CATEGORY | NUMBER OF LIBRARIES REPORTING | AVERAGE | DEPARTMENT | | STD DEV | NUMBER OF LIBRARIES REPORTING | INCREASE AVERAGE | LAST YEAR'S EXPENDITURES | |
|---------------------------------|-------------------------------------|---------|------------|---------|---------|-------------------------------------|---------------------|--------------------------|--------|
| | | | LOW | HIGH | | | | LOW | HIGH |
| TOTAL OPERATING | 9 | 57285. | 23419. | 135307. | 29502. | 9 | 5656. | 1224. | 10774. |
| SALARIES AND FRINGE BENEFITS | 9 | 55012. | 23019. | 135307. | 30279. | 9 | 4969. | 1202. | 10774. |
| AUTOMATED SYSTEMS | 1 | 1800. | 1800. | 1800. | 0. | 1 | 1315. | 1315. | 0. |
| OTHER SUPPORT SERVICES | 3 | 1631. | 993. | 2000. | 522. | 3 | 441. | 27. | 1000. |
| EQUIPMENT RENTAL | 1 | 2550. | 2550. | 2550. | 0. | 1 | 350. | 350. | 0. |
| COMMUNICATIONS | 3 | 1936. | 117. | 3000. | 1242. | 3 | 406. | -41. | 1424. |
| SUPPLIES | 4 | 763. | 400. | 1500. | 449. | 4 | 88. | 22. | 160. |
| OTHER OPERATING | 2 | 1175. | 150. | 2200. | 1025. | 2 | 333. | 15. | 650. |
| | | | | | | | | | 318. |

A: SURVEY OF 100 LIBRARIES. LARGE ACADEMIC STRATUM

TABLE X: INTERLIBRARY LOAN DEPARTMENT
10 LIBRARIES INCLUDED
A: BUDGET PROFILE

| BUDGET CATEGORY | NUMBER OF LIBRARIES REPORTING | LAST YEAR'S EXPENDITURES | | STD DEV | NUMBER OF LIBRARIES REPORTING | | | STD DEV |
|------------------------------|-------------------------------|--------------------------|--------|---------|-------------------------------|-------|------|---------|
| | | LOW | HIGH | | AVERAGE | STDEV | HIGH | |
| TOTAL OPERATING | 9 | 52257. | 22195. | 124528. | 27337. | 9 | 2.97 | 1.71 |
| SALARIES AND FRINGE BENEFITS | 9 | 50595. | 21417. | 124528. | 27330. | 9 | 2.84 | 1.68 |
| AUTOMATED SYSTEMS | 1 | 485. | 485. | 485. | 0. | 1 | 0.03 | 0.03 |
| OTHER SUPPORT SERVICES | 3 | 1190. | 871. | 1700. | 364. | 3 | 0.09 | 0.06 |
| EQUIPMENT RENTAL | 1 | 2200. | 2200. | 2200. | 0. | 1 | 0.14 | 0.14 |
| COMMUNICATIONS | 3 | 1440. | 154. | 2544. | 947. | 3 | 0.11 | 0.01 |
| SUPPLIES | 4 | 675. | 317. | 1340. | 406. | 4 | 0.05 | 0.02 |
| OTHER OPERATING | 2 | 843. | 135. | 1550. | 704. | 2 | 0.06 | 0.01 |

A: SURVEY OF 100 LIBRARIES. LARGE ACADEMIC STRATUM

TABLE X: INTERLIBRARY LOAN DEPARTMENT
10 LIBRARIES INCLUDED
R: STAFFING AND SALARY EXPENDITURES

| TYPE OF EMPLOYEE | NUMBER OF LIBRARIES REPORTING | FULL TIME EQUIVALENCIES | | | STD DEV | NUMBER OF LIBRARIES REPORTING | AVERAGE | ANNUAL SALARY EXPENDITURES \$ | | | STD DEV |
|-------------------------------------|-------------------------------|-------------------------|------|---------|---------|-------------------------------|---------|-------------------------------|--------|--------|---------|
| | | LOW | HIGH | STD DEV | | | | LOW | HIGH | | |
| PROFESSIONAL LIBRARIAN | 8 | 1.07 | 0.10 | 2.00 | 0.50 | 8 | 16655. | 1058. | 26316. | 7359. | |
| OTHER PROFESSIONAL | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0. | 0. | 0. | 0. | |
| LIBRARY ASSISTANT | 10 | 3.08 | 1.00 | 10.00 | 2.46 | 10 | 27755. | 6873. | 87468. | 22015. | |
| CLERK | 4 | 0.77 | 0.07 | 1.00 | 0.40 | 4 | 4258. | 374. | 5654. | 2244. | |
| STUDENT / PAGE | 7 | 1.14 | 0.30 | 3.00 | 0.82 | 8 | 4818. | 655. | 11856. | 3273. | |
| OTHER STAFF PAID BY OUTSIDE SOURCES | 1 | 0.42 | 0.42 | 0.42 | 0.0 | 1 | 4522. | 4522. | 4522. | 0. | |
| VOLUNTEER | 5 | 1.06 | 0.50 | 1.80 | 0.42 | 0 | 0. | 0. | 0. | 0. | |

| TYPE OF EMPLOYEE | NUMBER OF FTE REPORTED | AVERAGE SALARY PER FTE | | | STD DEV |
|------------------------|------------------------|------------------------|--------|---------|---------|
| | | LOW | HIGH | STD DEV | |
| PROFESSIONAL LIBRARIAN | 8.60 | 15493. | 10580. | 17453. | 1650. |
| OTHER PROFESSIONAL | 0.0 | 0. | 0. | 0. | 0. |
| LIBRARY ASSISTANT | 30.85 | 8997. | 6873. | 12320. | 1403. |
| CLERK | 3.07 | 5548. | 5343. | 5654. | 95. |
| STUDENT / PAGE | 9.00 | 4717. | 2183. | 8568. | 1240. |
| OTHER | 0.42 | 10767. | 10767. | 0. | 0. |

A: SURVEY OF 100 LIBRARIES. LARGE ACADEMIC STRATUM

TABLE X: INTERLIBRARY LOAN DEPARTMENT
10 LIBRARIES INCLUDED
B: STAFFING AND SALARY EXPENDITURES

| TYPE OF EMPLOYEE | NUMBER OF FTE REPORTED | REQUEST AVERAGE | HIGH | PER ILL FTE STD DEV | NUMBER OF LIBRARIES REPORTING | ILL SALARIES AVERAGE | ANNUAL EXPENSES | | |
|-------------------------------|------------------------|-----------------|----------|---------------------|-------------------------------|----------------------|-----------------|------|---------|
| | | | | | | | LOW | HIGH | STD DEV |
| PROFESSIONAL LIBRARIAN | 8.60 | 16447.20 | 6663.33 | 104369.94 | 13959.57 | 8 | 1.10 | 0.10 | 2.62 |
| OTHER PROFESSIONAL | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| LIBRARY ASSISTANT | 30.85 | 5464.47 | 3479.00 | 15403.00 | 2584.27 | 10 | 1.60 | 0.45 | 2.61 |
| CLERK | 3.07 | 19385.67 | 10437.00 | 295729.56 | 42259.61 | 4 | 0.33 | 0.02 | 0.52 |
| STUDENT / PAGE | 8.00 | 12915.35 | 5134.33 | 33316.66 | 8045.10 | 8 | 0.33 | 0.07 | 0.77 |
| OTHER | 0.42 | 49288.08 | 49288.08 | 49288.09 | 0.01 | 1 | 0.22 | 0.22 | 0.0 |
| STAFF PAID BY OUTSIDE SOURCES | 5.30 | 12679.23 | 7500.00 | 22328.00 | 4441.05 | 0 | 0.0 | 0.0 | 0.0 |
| VOLUNTEER | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| TOTAL | 56.24 | 29974.49 | 1776.32 | 7919.47 | 778.24 | 10 | 2.90 | 1.58 | 4.18 |
| | | | | | | | | | 0.68 |

A: SURVEY OF 100 LIBRARIES. LARGE ACADEMIC STRATUM

TABLE X: INTERLIBRARY LOAN DEPARTMENT

LIBRARIES INCLUDED

C: VOLUME OF BORROWING REQUESTS

| BORROWING REQUESTS | NUMBER OF LIBRARIES REPORTING | AVERAGE | LOW | HIGH | VOLUME | STD DEV |
|--------------------|-------------------------------|---------|-------|--------|--------|---------|
| TOTAL REQUESTS | 10 | 5431. | 2704. | 10000. | 2348. | |
| NUMBER FILLED | 10 | 4343. | 2434. | 7377. | 1413. | |
| FILL RATE | 10 | 86.3% | 58.1% | 98.6% | 13.0% | |
| % FILLED LOCALLY | 7 | 23.4% | 1.0% | 50.0% | 17.7% | |
| % FILLED IN STATE | 9 | 36.7% | 11.0% | 75.0% | 18.0% | |

A: SURVEY OF 100 LIBRARIES, LARGE ACADEMIC STRATUM

TABLE X: INTERLIBRARY LOAN DEPARTMENT

10 LIBRARIES INCLUDED

D: NUMBER OF INSTITUTIONS QUERIED

| STRATA | TOTAL | LIBRARIES REPORTING THIS STRATA | PERCENT |
|---------|---------|------------------------------------|-------------|
| 1.0-1.4 | 10 | 1* | 10.0% |
| 1.5-1.9 | 10 | 4* | 40.0% |
| 2.0-2.4 | 10 | 1* | 10.0% |
| 2.5-2.9 | 10 | 3* | 30.0% |
| 3.0-3.4 | 10 | 1* | 10.0% |
| 3.5-3.9 | 10 | 0* | 0.0% |
| 4.0-4.4 | 10 | 0* | 0.0% |
| 4.5-4.9 | 10 | 0* | 0.0% |
| 5.0-5.4 | 10 | 0* | 0.0% |
| MODE | 1.5-1.9 | | AVERAGE 1.9 |

A: SURVEY OF 100 LIBRARIES, LARGE ACADEMIC STRATUM

TABLE X: INTERLIBRARY LOAN DEPARTMENT
10 LIBRARIES INCLUDED

E: TIME REQUIRED TO FILL A REQUEST

| SOURCE | NUMBER OF LIBRARIES REPORTING | AVERAGE DAYS | | | HIGH | STD DEV |
|------------------------|-------------------------------------|--------------|-----|------|------|---------|
| | | AVERAGE | LOW | HIGH | | |
| THROUGH A RIB CENTER | 7 | 19. | 5. | 60. | 17. | |
| FROM A LIBRARY LOCALLY | 9 | 6. | 3. | 14. | 3. | |
| ELSEWHERE IN STATE | 10 | 10. | 3. | 15. | 3. | |
| ADJACENT STATES | 9 | 17. | 10. | 21. | 4. | |
| ELSEWHERE | 10 | 27. | 18. | 45. | 7. | |
| OVERALL | 10 | 16. | 6. | 27. | 8. | |

A: SURVEY OF 100 LIBRARIES. LARGE ACADEMIC STRATUM
TARIF X: INTERLIBRARY LOAN DEPARTMENT
10 LIBRARIES INCLUDED
F: VERIFICATION
9 LIBRARIES OF 9 LIBRARIES RESPONDING NORMALLY VERIFY BORROWING REQUESTS
OR 100.0%
2 LIBRARIES OF 10 LIBRARIES RESPONDING NORMALLY VERIFY LENDING REQUESTS
OR 20.0%

A: SURVEY OF 100 LIBRARIES, LARGE ACADEMIC STRATUM

TABLE X: INTELLIGENT LOAN DEPARTMENT
10 LIBRARIES INCLUDED
G: FREQUENCY OF BORROWERS TABLE

| STRATA | NUMBER OF LIBRARIES REPORTING | TOTAL OBSERVATIONS | FREQUENCY IN TABLE | | STD DEV | AVERAGE | PLACE IN TABLE LOW HIGH | STD DEV |
|------------------------|-------------------------------|--------------------|--------------------|------|---------|---------|-------------------------|---------|
| | | | LOW | HIGH | | | | |
| LARGE ACADEMIC LIBRARY | 8 | 18 | 2* | 1* | 4* | 1* | 5* | 1* |
| STATE LIBRARY | 2 | 3 | 2* | 1* | 2* | 1* | 7* | 5* |
| LARGE PUBLIC LIBRARY | 3 | 3 | 1* | 1* | 1* | 0* | 6* | 7* |
| OTHER REGIONAL LIBRARY | 2 | 2 | 1* | 1* | 0* | 4* | 2* | 5* |
| OTHER ACADEMIC LIBRARY | 10 | 48 | 5* | 2* | 7* | 1* | 5* | 10* |
| OTHER PUBLIC LIBRARY | 1 | 3 | 3* | 3* | 0* | 6* | 3* | 10* |
| BIBLIOGRAPHIC CENTER | 1 | 1 | 1* | 1* | 0* | 4* | 4* | 0* |
| SPECIAL LIBRARY | 7 | 9 | 1* | 1* | 2* | 0* | 5* | 1* |
| OTHER LIBRARY | 4 | 5 | 1* | 1* | 2* | 0* | 4* | 1* |

A: SURVEY OF 100 LIBRARIES. LARGE ACADEMIC STRATUM

TABLE X: INTERLIBRARY LOAN DEPARTMENT
10 LIBRARIES INCLUDED
H: FREQUENCY OF LENDERS TABLE

| STRATA | NUMBER OF LIBRARIES REPORTING | TOTAL OBSERVATIONS | AVERAGE | FREQUENCY IN TABLE | | | AVFRAGE | STD DEV | PLACE IN TABLE |
|------------------------|-------------------------------|--------------------|---------|--------------------|-----|---------|---------|---------|----------------|
| | | | | HIGH | LOW | STO DEV | | | |
| LARGE LIBRARY ACADEMIC | 10 | 51 | 5. | 1. | 8. | 2. | 7. | 1. | 10. |
| STATE LIBRARY | 5 | 8 | 2. | 1. | 2. | 0. | 4. | 1. | 9. |
| LARGE PUBLIC LIBRARY | 1 | 1 | 1. | 1. | 1. | 0. | 9. | 9. | 0. |
| OTHER REGIONAL LIBRARY | 0 | 0 | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| OTHER ACADEMIC LIBRARY | 7 | 14 | 2. | 1. | 3. | 1. | 6. | 1. | 10. |
| OTHER PUBLIC LIBRARY | 1 | 1 | 1. | 1. | 1. | 0. | 2. | 2. | 2. |
| BIBLIOGRAPHIC CENTER | 1 | 1 | 1. | 1. | 1. | 0. | 4. | 4. | 0. |
| SPECIAL LIBRARY | 3 | 4 | 1. | 1. | 2. | 0. | 3. | 1. | 5. |
| OTHER LIBRARY | 3 | 4 | 1. | 1. | 2. | 0. | 5. | 3. | 8. |

A: SURVEY OF 100 LIBRARIES, LARGE ACADEMIC STRATUM

TABLE X: INFILTRARY LOAN DEPARTMENT
IN LIBRARIES INCLUDED
I: LOCATION OF BORROWERS TABLE

| STRATA | NUMBER OF LIBRARIES REPORTING | TOTAL OBSERVATIONS | FREQUENCY IN TABLE | | STD DEV | AVERAGE | PLACE IN TABLE LOW | HIGH | STD DEV |
|-------------------------|-------------------------------------|-----------------------|--------------------|------|---------|---------|-----------------------|------|---------|
| | | | AVERAGE LOW | HIGH | | | | | |
| LOCAL LIBRARY | 7 | 32 | 5. | 2. | .8. | 3. | 5. | 1. | 10. |
| ELSEWHERE IN STATE | 9 | 40 | 5. | 1. | 9. | 3. | 5. | 1. | 10. |
| ADJOINING STATES | 9 | 17 | 2. | 1. | 3. | 1. | 6. | 2. | 9. |
| OTHER WESTERN STATES | ? | 3 | 2. | 1. | 2. | 1. | 7. | 5. | 10. |
| OTHER EASTERN STATES | 0 | 0 | 0. | 0. | 0. | 0. | 0. | 0. | 0. |

A: SURVEY OF 100 LIBRARIES. LARGE ACADEMIC STRATUM
 TABLE X: INTERLIBRARY LOAN DEPARTMENT
 10 LIBRARIES INCLUDED
 J: LOCATION OF LENDERS TABLE

| STRATA | LOCAL LIBRARY | NUMBER OF LIBRARIES REPORTING | TOTAL OBSERVATIONS | FREQUENCY IN TABLE | | | STD DEV | AVERAGE | PLACE IN TABLE LOW | HIGH | STD DEV |
|----------------------|---------------|-------------------------------|--------------------|--------------------|--------|------|---------|---------|--------------------|------|---------|
| | | | | LOW | MEDIUM | HIGH | | | | | |
| ELSEWHERE IN STATE | 7 | 19 | 3. | 3. | 2. | 5. | 1. | 4. | 1. | 10. | 3. |
| ADJOINING STATES | 8 | 21 | 3. | 1. | 5. | 1. | 5. | 2. | 1. | 8. | 2. |
| OTHER WESTERN STATES | 4 | 6 | 2. | 1. | 3. | 1. | 8. | 1. | 10. | 3. | |
| OTHER EASTERN STATES | 8 | 29 | 4. | 2. | 6. | 1. | 6. | 1. | 10. | 2. | |

A: SURVEY OF 100 LIBRARIES, LARGE ACADEMIC STRATUM

TABLE X: INTERLIBRARY LOAN DEPARTMENT
IN LIBRARIES INCLUDED

K: CHARACTERISTICS OF FILLED BORROWING REQUESTS

| TYPE OF MATERIALS | NUMBER OF LIBRARIES REPORTING | PHOTOCOPY/DUPLICATE | | | AVERAGE | STD DEV | PERCENT OF TOTAL | | |
|----------------------|-------------------------------|---------------------|-------|-------|---------|---------|------------------|--------|---------|
| | | AVERAGE | LOW | HIGH | | | LOW | HIGH | STD DEV |
| BOOKSTOCK | 3 | 48. | 20. | 100. | 37. | 3.48 | 1.68 | 6.5% | 2.2 |
| PERIODICALS | 8 | 2220. | 1366. | 4000. | 900. | 98.5% | 91.9% | 100.0% | 2.6 |
| MICROFORMS | 4 | 58. | 5. | 150. | 56. | 51.0% | 4.0% | 100.0% | 34.0 |
| AUDIO/VISUAL | 0 | 0. | 0. | 0. | 0. | 0.0% | 0.0% | 0.0% | 0.0 |
| GOVERNMENT DOCUMENTS | 1 | 15. | 15. | 15. | 0. | 75.0% | 75.0% | 75.0% | 0.0 |
| OTHER | 1 | 450. | 450. | 450. | 0. | 56.3% | 56.3% | 56.3% | 0.0 |
| TOTAL | 10 | 2233. | 1193. | 4150. | 967. | 50.48 | 35.8% | 66.7% | 7.8 |

| TYPE OF MATERIALS | NUMBER OF LIBRARIES REPORTING | ORIGINAL | | | AVERAGE | STD DEV | PERCENT OF TOTAL | | |
|----------------------|-------------------------------|----------|-------|-------|---------|---------|------------------|--------|---------|
| | | AVERAGE | LOW | HIGH | | | LOW | HIGH | STD DEV |
| BOOKSTOCK | 8 | 1894. | 973. | 2648. | 509. | 98.7% | 93.5% | 100.0% | 2.1 |
| PERIODICALS | 4 | 52. | 10. | 123. | 43. | 3.0% | 0.6% | 8.1% | 3.0 |
| MICROFORMS | 4 | 79. | 25. | 120. | 42. | 74.0% | 50.0% | 100.0% | 24.0 |
| AUDIO/VISUAL | 3 | 9. | 1. | 25. | 11. | 100.0% | 100.0% | 100.0% | 0.0 |
| GOVERNMENT DOCUMENTS | 5 | 138. | 5. | 369. | 139. | 85.0% | 25.0% | 100.0% | 30.0 |
| OTHER | 2 | 176. | 1. | 350. | 175. | 71.9% | 43.8% | 100.0% | 28.1 |
| TOTAL | 10 | 2111. | 1023. | 3467. | 597. | 49.68 | 33.38 | 64.2% | 7.8 |

PAGE 2

TABLE X: INTERLIBRARY LOAN DEPARTMENT
K: CHARACTERISTICS OF FILLED BORROWING REQUESTS

| TYPE OF MATERIALS | NUMBER OF LIBRARIES REPORTING | AVERAGE | TOTAL | HIGH | STD OF V | AVERAGE | PERCENT OF TOTAL | STD OF V |
|----------------------|-------------------------------|--------------|--------------|--------------|--------------|---------------|------------------|------------|
| | | | LOW | 492. | 100.0% | 100.0% | 0.0 | 0.0 |
| BOOKSTOCK | 8 | 1912. | 993. | 2648. | 492. | 100.0% | 100.0% | 0.0 |
| PERIODICALS | 8 | 2246. | 1391. | 4000. | 892. | 100.0% | 100.0% | 0.0 |
| MICROFORMS | 5 | 109. | 50. | 150. | 34. | 100.0% | 100.0% | 0.0 |
| AUDIO/VISUAL | 3 | 9. | 1. | 25. | 11. | 100.0% | 100.0% | 0.0 |
| GOVERNMENT DOCUMENTS | 5 | 141. | 20. | 369. | 137. | 100.0% | 100.0% | 0.0 |
| OTHER | 2 | 4.01. | 1. | 400. | 400. | 100.0% | 100.0% | 0.0 |
| TOTAL | 10 | 4343. | 2434. | 7377. | 1413. | 100.0% | 100.0% | 0.0 |

A: SURVEY OF 100 LIBRARIANS. LARGE ACADEMIC STRATUM

TABLE X: INTERLIBRARY LOAN DEPARTMENT
10 LIBRARIES INCLUDED

L: CHARACTERISTICS OF FILLED LENDING REQUESTS

| TYPE OF MATERIALS | NUMBER OF LIBRARIES REPORTING | PHOTOCOPY/DUPLICATE | | | AVGAGE | STD DEV | PERCENT OF TOTAL | | |
|----------------------|-------------------------------|---------------------|-------|--------|--------|---------|------------------|--------|---------|
| | | LOW | HIGH | STDEV | | | LOW | HIGH | STD DEV |
| BOOKSTOCK | 1 | 60. | 60. | 0. | 2.3% | 2.3% | 2.3% | 2.3% | 0.0 |
| PERIODICALS | 8 | 4016. | 1000. | 14295. | 3997. | 98.4% | 87.7% | 100.0% | 4.0 |
| MICROFORMS | 4 | 158. | 25. | 375. | 131. | 67.7% | 16.7% | 100.0% | 33.4 |
| AUDIO/VISUAL | 0 | 0. | 0. | 0. | 0. | 0.0% | 0.0% | 0.0% | 0.0 |
| GOVERNMENT DOCUMENTS | 1 | 12. | 12. | 12. | 0. | 25.0% | 25.0% | 25.0% | 0.0 |
| OTHER | 1 | 50. | 50. | 50. | 0. | 8.0% | 8.0% | 8.0% | 0.0 |
| TOTAL | 10 | 4235. | 1025. | 14445. | 3635. | 45.5% | 30.0% | 58.9% | 9.5 |

| TYPE OF MATERIALS | NUMBER OF LIBRARIES REPORTING | ORIGINAL | | | AVGAGE | STD DEV | PERCENT OF TOTAL | | |
|----------------------|-------------------------------|----------|-------|--------|--------|---------|------------------|--------|---------|
| | | LOW | HIGH | STDEV | | | LOW | HIGH | STD DEV |
| BOOKSTOCK | 8 | 3487. | 1150. | 7725. | 2238. | 90.7% | 97.7% | 100.0% | 0.8 |
| PERIODICALS | 2 | 1006. | 12. | 2000. | 994. | 6.5% | 0.8% | 12.3% | 5.8 |
| MICROFORMS | 3 | 203. | 20. | 500. | 212. | 43.1% | 5.1% | 83.3% | 32.0 |
| AUDIO/VISUAL | 3 | 1795. | 5. | 5278. | 2463. | 100.0% | 100.0% | 100.0% | 0.0 |
| GOVERNMENT DOCUMENTS | 4 | 194. | 20. | 391. | 168. | 93.8% | 75.0% | 100.0% | 10.8 |
| OTHER | 1 | 575. | 575. | 575. | 0. | 92.0% | 92.0% | 92.0% | 0.0 |
| TOTAL | 10 | 4788. | 1175. | 11130. | 2938. | 54.3% | 41.1% | 70.0% | 9.5 |

TABLE X: INTERLIBRARY LOAN DEPARTMENT
L: CHARACTERISTICS OF FILLED LENDING REQUESTS

| TYPE OF MATERIALS | NUMBER OF REPORTINGS | AVERAGE | TOTAL | | STD DEV | AVERAGE | PERCENT OF TOTAL | | |
|----------------------|----------------------|---------|-------|--------|---------|---------|------------------|--------|---------|
| | | | LOW | HIGH | | | LOW | HIGH | STN DEV |
| BOOKSTORE | 8 | 3494. | 1150. | 7725. | 2235. | 100.0% | 100.0% | 100.0% | 0.0 |
| PERIODICALS | 8 | 4267. | 1000. | 16295. | 4662. | 100.0% | 100.0% | 100.0% | 0.0 |
| MICROFORMS | 4 | 310. | 25. | 600. | 213. | 100.0% | 100.0% | 100.0% | 0.0 |
| AUDIO/VISUAL | 3 | 1705. | 5. | 5278. | 2433. | 100.0% | 100.0% | 100.0% | 0.0 |
| GOVERNMENT DOCUMENTS | 4 | 197. | 20. | 391. | 165. | 100.0% | 100.0% | 100.0% | 0.0 |
| OTHER | 1 | 625. | 625. | 0. | 0. | 100.0% | 100.0% | 100.0% | 0.0 |
| TOTAL | 10 | 9028. | 2250. | 25575. | 6267. | 100.0% | 100.0% | 100.0% | 0.0 |

A: SURVEY OF 100 LIBRARIES. LARGE
 TABLE VI: ADMINISTRATIVE DEPARTMENT
 10 LIBRARIES INCLUDED
 A: RINGST PROFILE

| BUDGET CATEGORY | NUMBER OF LIBRARIES REPORTING | DEPARTMENT | | | STD DEV | NUMBER OF LIBRARIES REPORTING | INCREASE OVER LAST YEAR'S EXPENDITURES | | | STD DEV |
|---------------------------------|-------------------------------------|------------|---------|---------|---------|-------------------------------------|--|---------|---------|---------|
| | | LOW | AVERAGE | HIGH | | | LOW | HIGH | STD DEV | |
| TOTAL OPERATING | 10 | 241087. | 108011. | 606537. | 133704. | 10 | 24765. | 4875. | 55641. | 15299. |
| SALARIES AND FRINGE BENEFITS | 10 | 221325. | 101651. | 468451. | 97174. | 10 | 28395. | 4885. | 55641. | 17189. |
| AUTOMATED SYSTEMS | 1 | 10276. | 10276. | 10276. | 0. | 1 | 7876. | 7876. | 7876. | 0. |
| OTHER SUPPORT SERVICES | 4 | 30431. | 1700. | 115219. | 48954. | 4 | -14363. | -42822. | 239. | 19727. |
| EQUIPMENT PENTAL | 3 | 14542. | 2400. | 27600. | 10308. | 3 | 2896. | 960. | 4812. | 1936. |
| COMMUNICATIONS | 4 | 3882. | 990. | 7536. | 2450. | 4 | -182. | -500. | 308. | 308. |
| SUPPLIES | 4 | 1569. | 770. | 2298. | 546. | 4 | -186. | -1278. | 261. | 632. |
| OTHER OPERATING | 1 | 200. | 200. | 200. | 0. | 1 | 20. | 20. | 0. | 0. |

A: SURVEY OF 100 LIBRARIES. LARGE

TABLE XI: ADMINISTRATIVE DEPARTMENT
 10 LIBRARIES INCLUDED
 A: BUDGET PROFILE

| BUDGET CATEGORY | NUMBER OF LIBRARIES REPORTING | LAST YEAR'S EXPENDITURES | | STD DEV |
|---------------------------------|-------------------------------------|--------------------------|---------|---------|
| | | AVERAGE | STD DEV | |
| TOTAL OPERATING | 10 | 218799. | 103136. | 593785. |
| SALARIES AND FRINGE BENEFITS | 10 | 195770. | 96766. | 416057. |
| AUTOMATED SYSTEMS | 1 | 2400. | 2400. | 0. |
| OTHER SUPPORT SERVICES | 4 | 41653. | 1461. | 158041. |
| EQUIPMENT RENTAL | 3 | 12611. | 2400. | 26640. |
| COMMUNICATIONS | 4 | 4063. | 1150. | 7910. |
| SUPPLIES | 4 | 1755. | 640. | 2984. |
| OTHER OPERATING | 1 | 180. | 180. | 0. |

A: SURVEY OF 100 LIBRARIES. LARGE ACADEMIC STRATUM

TABLE XI: ADMINISTRATIVE DEPARTMENT
10 LIBRARIES INCLUDED
A: STAFFING AND SALARY EXPENDITURES

| TYPE OF EMPLOYEE | NUMBER OF LIBRARIES REPORTING | FULL TIME EQUIVALENCES | | | STD DEV | ANNUAL SALARY EXPENDITURES \$ | | | | |
|-------------------------------|-------------------------------|------------------------|-------|---------|---------|-------------------------------|-------------------------------|---------|---------|--------|
| | | LOW | HIGH | AVERAGE | | | NUMBER OF LIBRARIES REPORTING | AVERAGE | LOW | HIGH |
| PROFESSIONAL LIBRARIAN | 10 | 4.95 | 2.00 | 8.00 | 1.74 | 10 | 115477. | 52340. | 18444. | 36056. |
| OTHER PROFESSIONAL | 5 | 1.80 | 1.00 | 3.00 | 0.75 | 5 | 29698. | 13600. | 54000. | 14362. |
| LIBRARY ASSISTANT | 2 | 3.50 | 1.00 | 6.00 | 2.50 | 2 | 36512. | 10328. | 62695. | 26183. |
| CLERK | 9 | 6.06 | 2.00 | 14.50 | 4.40 | 9 | 55725. | 11258. | 130608. | 42123. |
| STUDENT / PAGE | 7 | 1.14 | .0.25 | 2.80 | 0.98 | 8 | 5081. | 593. | 12896. | 4398. |
| OTHER | 3 | 2.50 | 1.00 | 3.50 | 1.08 | 3 | 2659. | 12576. | 41352. | 11756. |
| STAFF PAY IN ANY OTHER SOURCE | 3 | 2.55 | 0.30 | 6.35 | 2.70 | 0 | 0. | 0. | 0. | 0. |
| VOLUNTEER | 0 | 0.0 | 0.0 | 0.0 | 0 | 0 | 0. | 0. | 0. | 0. |

| TYPE OF EMPLOYEE | NUMBER OF LIBRARIES REPORTING | AVERAGE SALARY PER FTE | | | STD DEV |
|------------------------|-------------------------------|------------------------|--------|---------|---------|
| | | LOW | HIGH | AVERAGE | |
| PROFESSIONAL LIBRARIAN | 49.50 | 23329. | 16178. | 28842. | 4729. |
| OTHER PROFESSIONAL | 9.00 | 16499. | 13600. | 18000. | 1377. |
| LIBRARY ASSISTANT | 7.00 | 10432. | 10328. | 10449. | 42. |
| CLERK | 54.50 | 9202. | 5629. | 11322. | 1239. |
| STUDENT / PAGE | 7.99 | 4910. | 1977. | 8567. | 1420. |
| OTHER | 7.50 | 10664. | 8683. | 12576. | 1636. |

A: SURVEY OF 100 LIBRARIES, LARGE

ACADEMIC STRATUM

TABLE VI: ADMINISTRATIVE DEPARTMENT

10 LIBRARIES INCLUDED

B: STAFFING AND SALARY EXPENDITURES

| TYPE OF EMPLOYEE | NUMBER OF FTE REPORTING | | | PER FTE | | | NUMBER OF LIBRARIES REPORTING | ANNUAL | | |
|-------------------------------|-------------------------|--------|-------|---------|--------|-----|-------------------------------|---------|------------|-------------------|
| | AVERAGE | LOW | HIGH | HIGH | MID | LOW | | ADM SAL | \$ EXP PER | TOTAL LIBRARY FTE |
| PROFESSIONAL LIBRARIAN | 40.50 | 51.20 | 19.80 | 114.25 | 19.69 | 10 | 532.18 | 229.06 | 1318.80 | 297.52 |
| OTHER PROFESSIONAL | 0.00 | 133.23 | 49.50 | 228.50 | 78.74 | 5 | 155.14 | 59.52 | 313.92 | 105.13 |
| LIBRARY ASSISTANT | 7.00 | 81.57 | 78.67 | 99.00 | 7.12 | 2 | 118.58 | 104.32 | 132.83 | 14.25 |
| CLERK | 54.50 | 37.84 | 14.14 | 114.25 | 27.97 | 9 | 253.05 | 55.14 | 564.66 | 182.72 |
| STUDENT / PAGE | 7.99 | 220.62 | 75.36 | 780.00 | 182.15 | 8 | 20.52 | 2.90 | 54.27 | 15.29 |
| OTHER | 7.50 | 115.30 | 68.06 | 217.49 | 48.42 | 3 | 92.91 | 57.82 | 127.58 | 28.48 |
| STAFF PAID BY OUTSIDE SOURCES | 7.65 | 82.70 | 34.25 | 680.60 | 134.61 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| VOLUNTEER | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| TOTAL | 143.14 | 17.71 | 6.60 | 38.08 | 8.59 | 10 | 905.50 | 386.53 | 2115.98 | 513.22 |



APPENDIX F

TABLES GENERATED BY THE FACT SUBROUTINE



L
LIBRARY NO. 1 ACTIVITY SHFET SUMMARY II: TIME PROFILE

| ACT NO. | TIME WIN | | | | | | | PERCENT OF TOTAL GROUP TIME | | | | | | | | | |
|------------|----------|---|------|-----|------|------|---|-----------------------------|-------|------|------|-------|-------|-------|-------|------|------|
| | A | B | C | D | E | F | G | H | TOTAL | A | B | C | D | E | F | G | H |
| 1 | 0 | 0 | 1095 | 0 | 0 | 0 | 0 | 0 | 1095 | 0.0% | 0.0% | 5.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| 2 | 195 | 0 | 640 | 0 | 149 | 0 | 0 | 0 | 984 | 2.2% | 0.0% | 2.9% | 0.0% | 2.5% | 0.0% | 0.0% | 0.0% |
| 3 | 0 | 0 | 270 | 0 | 0 | 0 | 0 | 0 | 270 | 0.0% | 0.0% | 1.2% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| 4 | 0 | 0 | 315 | 0 | 0 | 0 | 0 | 0 | 315 | 0.0% | 0.0% | 1.4% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| 5 | 0 | 0 | 855 | 0 | 0 | 0 | 0 | 0 | 855 | 0.0% | 0.0% | 3.9% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| 6 | 0 | 0 | 465 | 0 | 1150 | 0 | 0 | 0 | 1615 | 0.0% | 0.0% | 2.1% | 0.0% | 1.9% | 0.0% | 0.0% | 0.0% |
| 7 | 0 | 0 | 115 | 0 | 350 | 0 | 0 | 0 | 465 | 0.0% | 0.0% | 0.5% | 0.0% | 6.0% | 0.0% | 0.0% | 0.0% |
| 8 | 0 | 0 | 120 | 0 | 5 | 0 | 0 | 0 | 125 | 0.0% | 0.0% | 0.5% | 0.0% | 0.1% | 0.0% | 0.0% | 0.0% |
| 9 | 0 | 0 | 95 | 0 | 1004 | 247 | 0 | 0 | 1346 | 0.0% | 0.0% | 0.4% | 0.0% | 17.2% | 8.4% | 0.0% | 0.0% |
| 10 | 0 | 0 | 0 | 0 | 0 | 1741 | 0 | 0 | 1741 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 59.2% | 0.0% | 0.0% |
| 11 | 0 | 0 | 335 | 0 | 894 | 0 | 0 | 0 | 1229 | 0.0% | 0.0% | 1.5% | 0.0% | 15.3% | 0.0% | 0.0% | 0.0% |
| 12 | 0 | 0 | 195 | 230 | 330 | 46 | 0 | 0 | 801 | 0.0% | 0.0% | 0.9% | 45.1% | 5.6% | 1.6% | 0.0% | 0.0% |
| 13 | 0 | 0 | 200 | 0 | 0 | 0 | 0 | 0 | 200 | 0.0% | 0.0% | 0.9% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| 14 | 0 | 0 | 120 | 45 | 0 | 0 | 0 | 0 | 165 | 0.0% | 0.0% | 0.5% | 8.8% | 0.0% | 0.0% | 0.0% | 0.0% |
| 15 | 0 | 0 | 110 | 0 | 0 | 82 | 0 | 0 | 192 | 0.0% | 0.0% | 0.5% | 0.0% | 0.0% | 2.8% | 0.0% | 0.0% |
| 16 | 0 | 0 | 2690 | 0 | 0 | 0 | 0 | 0 | 2690 | 0.0% | 0.0% | 12.2% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| 17 | -NE- | | | | | | | -NE- | | | | | | | -NE- | | |
| 18 | 80 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 80 | 0.9% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| 19 | 225 | 0 | 1525 | 0 | 0 | 191 | 0 | 0 | 1941 | 2.5% | 0.0% | 6.9% | 0.0% | 0.0% | 6.5% | 0.0% | 0.0% |
| 20 | 785 | 0 | 1725 | 0 | 0 | 0 | 0 | 0 | 2510 | 8.7% | 0.0% | 7.8% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| 21 | 0 | 0 | 615 | 0 | 0 | 0 | 0 | 0 | 615 | 0.0% | 0.0% | 2.8% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| 22 | 0 | 0 | 350 | 0 | 355 | 0 | 0 | 0 | 705 | 0.0% | 0.0% | 1.6% | 0.0% | 6.1% | 0.0% | 0.0% | 0.0% |
| 23 | 50 | 0 | 265 | 40 | 420 | 77 | 0 | 0 | 852 | 0.6% | 0.0% | 1.2% | 7.8% | 7.2% | 2.6% | 0.0% | 0.0% |

NOTE: -NE- = NO ENTRY FOR THIS TASK
 * EMPLOYEE CATEGORY DESIGNATIONS: A=PROFESSIONAL LIBRARIAN; B=OTHER PROFESSIONAL; C=LIBRARY ASSISTANT; D=CLERK;
 F.= STUDENT/PAGE; E= OTHER; G= PAY BY OUTSIDE SOURCE; H= VOLUNTEER.

LIBRARY NOTIFICATION SHEET SUMMARY 1: TIME PROFILE

| ACT NO | A | B | C | TIME IN MIN | | | | PERCENT OF TOTAL GROUP TIME | | | | | | | | | |
|-----------|------|---|-------|-------------|------|------|---|-----------------------------|-------|--------|------|--------|--------|--------|--------|--------|--------|
| | | | | D | E | F | G | H | TOTAL | A | B | C | D | E | F | G | H |
| 25 | 0 | 0 | 1195 | 0 | 0 | 0 | 0 | 0 | 1195 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| 26 | 0 | 0 | 725 | 0 | 0 | 0 | 0 | 0 | 725 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| 27 | 0 | 0 | 205 | 0 | 0 | 0 | 0 | 0 | 205 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| 28 | 0 | 0 | 215 | 0 | 0 | 395 | 0 | 0 | 610 | 0.0% | 0.0% | 1.0% | 0.0% | 0.0% | 13.4% | 0.0% | 0.0% |
| 29 | 10 | 0 | 185 | 0 | 0 | 0 | 0 | 0 | 195 | 0.1% | 0.0% | 0.8% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| 30 | 0 | 0 | 135 | 0 | 0 | 0 | 0 | 0 | 135 | 0.0% | 0.0% | 0.6% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| 31 | 420 | 0 | 405 | 0 | 0 | 0 | 0 | 0 | 825 | 4.6% | 0.0% | 1.8% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| 32 | 0 | 0 | 195 | 236 | 50 | 0 | 0 | 481 | 0.0% | 0.0% | 0.0% | 38.2% | 4.0% | 1.7% | 0.0% | 0.0% | 0.0% |
| 33 | 0 | 0 | 200 | 0 | 0 | 0 | 0 | 0 | 200 | 0.0% | 0.0% | 0.9% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| 34 | 1620 | 0 | 3525 | 0 | 60 | 50 | 0 | 0 | 5255 | 17.9% | 0.0% | 1.60% | 0.0% | 1.0% | 1.7% | 0.0% | 0.0% |
| 35 | 135 | 0 | 1180 | 0 | 230 | 60 | 0 | 0 | 1605 | 1.5% | 0.0% | 5.3% | 0.0% | 3.9% | 2.0% | 0.0% | 0.0% |
| 36 | 200 | 0 | 475 | 0 | 550 | 0 | 0 | 0 | 1225 | 2.2% | 0.0% | 2.2% | 0.0% | 9.4% | 0.0% | 0.0% | 0.0% |
| 37 | 20 | 0 | 210 | 0 | 0 | 0 | 0 | 0 | 230 | 0.2% | 0.0% | 1.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| 38 | 0 | 0 | 175 | 0 | 0 | 0 | 0 | 0 | 175 | 0.0% | 0.0% | 0.8% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| 39 | 0 | 0 | 380 | 0 | 0 | 0 | 0 | 0 | 380 | 0.0% | 0.0% | 1.7% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| 40 | 0 | 0 | 105 | 0 | 0 | 0 | 0 | 0 | 105 | 0.0% | 0.0% | 0.5% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| 41 | 0 | 0 | 100 | 0 | 0 | 0 | 0 | 0 | 100 | 0.0% | 0.0% | 0.5% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| 42 | 0 | 0 | 560 | 0 | 120 | 0 | 0 | 0 | 680 | 0.0% | 0.0% | 2.5% | 0.0% | 2.1% | 0.0% | 0.0% | 0.0% |
| 43 | 5295 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5295 | 58.6% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| TOTAL | 9035 | 0 | 22075 | 510 | 5853 | 2939 | 0 | 0 | 40412 | 100.0% | 0.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

NOTE: -NE- = NO ENTRY FOR THIS TASK
*EMPLOYEE CATEGORY DESIGNATIONS: A=PROFESSIONAL LIBRARIAN; B= OTHER PROFESSIONAL; C= LIBRARY ASSISTANT; D= CLERK;
E= STUDENT/PAGE; F= OTHER; G= PAID BY OUTSIDE SOURCE; H= VOLUNTEER.

LIBRARY NO. 1 ACTIVITY SHEET SUMMARY II: TASK TIME PROFILE

| ACT NO. | TOTAL TASK TIME: MIN | PERCENT OF TOTAL TASK TIME | | | | EMPLOYEE CATEGORY ^a E | G | H | VOLUME | UNIT TIME: MIN | INC |
|------------|----------------------------|----------------------------|------|--------|-------|--|--------|------|--------|-------------------|-----|
| | | A | B | C | D | | | | | | |
| 1 | 1095 | 0.0% | 0.0% | 100.0% | 0.0% | 0.0% | 0.0% | 0.0% | 1438 | 0.76 | 0 |
| 2 | 984 | 19.8% | 0.0% | 65.0% | 0.0% | 15.1% | 0.0% | 0.0% | 142 | 6.93 | 0 |
| 3 | 270 | 0.0% | 0.0% | 100.0% | 0.0% | 0.0% | 0.0% | 0.0% | 268 | 1.01 | 0 |
| 4 | 315 | 0.0% | 0.0% | 100.0% | 0.0% | 0.0% | 0.0% | 0.0% | 248 | 1.27 | 0 |
| 5 | 855 | 0.0% | 0.0% | 100.0% | 0.0% | 0.0% | 0.0% | 0.0% | 284 | 3.01 | 0 |
| 6 | 1615 | 0.0% | 0.0% | 28.8% | 0.0% | 71.2% | 0.0% | 0.0% | 670 | 2.41 | 0 |
| 7 | 465 | 0.0% | 0.0% | 24.7% | 0.0% | 75.3% | 0.0% | 0.0% | 336 | 1.38 | 0 |
| 8 | 125 | 0.0% | 0.0% | 96.0% | 0.0% | 4.0% | 0.0% | 0.0% | 239 | 0.52 | 0 |
| 9 | 1346 | 0.0% | 0.0% | 7.1% | 0.0% | 74.6% | 18.4% | 0.0% | 4154 | 0.32 | 1 |
| 10 | 1741 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100.0% | 0.0% | 2386 | 0.73 | 0 |
| 11 | 1229 | 0.0% | 0.0% | 27.3% | 0.0% | 72.7% | 0.0% | 0.0% | 581 | 2.12 | 0 |
| 12 | 801 | 0.0% | 0.0% | 24.3% | 28.7% | 41.2% | 5.7% | 0.0% | 315 | 2.54 | 0 |
| 13 | 200 | 0.0% | 0.0% | 100.0% | 0.0% | 0.0% | 0.0% | 0.0% | 150 | 1.33 | 0 |
| 14 | 165 | 0.0% | 0.0% | 72.7% | 27.3% | 0.0% | 0.0% | 0.0% | 110 | 1.50 | 0 |
| 15 | 192 | 0.0% | 0.0% | 57.3% | 0.0% | 42.7% | 0.0% | 0.0% | 298 | 0.64 | 0 |
| 16 | 2690 | 0.0% | 0.0% | 100.0% | 0.0% | 0.0% | 0.0% | 0.0% | 1891 | 1.42 | 0 |
| 17 | -NE- | | | | | | | | | | |
| 18 | -NE- | | | | | | | | | | |
| 19 | 80 | 100.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | -NE- | | |
| 20 | 1941 | 11.6% | 0.0% | 78.6% | 0.0% | 9.8% | 0.0% | 0.0% | 452 | 3.19 | 1 |
| 21 | 2510 | 31.3% | 0.0% | 68.7% | 0.0% | 0.0% | 0.0% | 0.0% | 403 | 6.23 | 0 |
| 22 | 615 | 0.0% | 0.0% | 100.0% | 0.0% | 0.0% | 0.0% | 0.0% | 253 | 2.43 | 0 |
| 23 | 705 | 0.0% | 0.0% | 49.6% | 0.0% | 50.4% | 0.0% | 0.0% | 511 | 1.38 | 0 |
| 24 | 852 | 5.9% | 0.0% | 31.1% | 4.7% | 49.3% | 9.0% | 0.0% | 296 | 2.71 | 1 |

NOTE: -NE- = NO ENTRY FOR THIS TASK
^a EMPLOYEE CATEGORY DESIGNATION: A. PROFESSIONAL LIBRARIAN; B. OTHER PROFESSIONAL; C. LIBRARY ASSISTANT; D. CLERK;
^b STUDENT/PAGE: F. OTHER; G. PAID BY OUTSIDE SOURCE; H. VOLUNTEER.

LITERARY NO.
1
LIBRARY ACTIVITY SHEET SUMMARY III: TASK TIME PROFILE

| ACT NO. | TOTAL TIME:MIN | PERCENT OF TOTAL TASK TIME | | | EMPLOYEE CATEGORY* | F | G | H | VOLUME | UNIT TIME:MIN | INC |
|------------|-------------------|----------------------------|------|--------|-----------------------|-------|-------|------|--------|------------------|-----|
| | | A | B | C | | | | | | | |
| 25 | 1195 | 0.0% | 0.0% | 100.0% | 0.0% | 0.0% | 0.0% | 0.0% | 692 | 1.73 | 0 |
| 26 | 725 | 0.0% | 0.0% | 100.0% | 0.0% | 0.0% | 0.0% | 0.0% | 291 | 2.49 | 0 |
| 27 | 205 | 0.0% | 0.0% | 100.0% | 0.0% | 0.0% | 0.0% | 0.0% | 82 | 2.50 | 0 |
| 28 | 610 | 0.0% | 0.0% | 35.2% | 0.0% | 0.0% | 64.8% | 0.0% | 110 | 1.95 | 1 |
| 29 | 195 | 5.1% | 0.0% | 94.9% | 0.0% | 0.0% | 0.0% | 0.0% | 32 | 6.09 | 0 |
| 30 | 135 | 0.0% | 0.0% | 100.0% | 0.0% | 0.0% | 0.0% | 0.0% | 32 | 4.22 | 0 |
| 31 | 825 | 50.9% | 0.0% | 49.1% | 0.0% | 0.0% | 0.0% | 0.0% | 388 | 2.05 | 1 |
| 32 | 481 | 0.0% | 0.0% | 0.0% | 40.5% | 49.1% | 10.4% | 0.0% | 128 | 3.76 | 0 |
| 33 | 200 | 0.0% | 0.0% | 100.0% | 0.0% | 0.0% | 0.0% | 0.0% | 704 | 0.28 | 0 |
| 34 | 5255 | 30.8% | 0.0% | 67.1% | 0.0% | 1.1% | 1.0% | 0.0% | 533 | 0.66 | 1 |
| 35 | 1605 | 4.4% | 0.0% | 73.5% | 0.0% | 14.3% | 3.7% | 0.0% | 0.0% | -NE- | |
| 36 | 1225 | 16.3% | 0.0% | 38.8% | 0.0% | 44.9% | 0.0% | 0.0% | 55 | 1.18 | 1 |
| 37 | 230 | 8.7% | 0.0% | 91.3% | 0.0% | 0.0% | 0.0% | 0.0% | 42 | 5.00 | 1 |
| 38 | 175 | 0.0% | 0.0% | 100.0% | 0.0% | 0.0% | 0.0% | 0.0% | 56 | 1.07 | 1 |
| 39 | 380 | 0.0% | 0.0% | 100.0% | 0.0% | 0.0% | 0.0% | 0.0% | 233 | 1.63 | 0 |
| 40 | 105 | 0.0% | 0.0% | 100.0% | 0.0% | 0.0% | 0.0% | 0.0% | 74 | 1.42 | 0 |
| 41 | 100 | 0.0% | 0.0% | 100.0% | 0.0% | 0.0% | 0.0% | 0.0% | 4 | 5.00 | 1 |
| 42 | 680 | 0.0% | 0.0% | 82.4% | 0.0% | 17.6% | 0.0% | 0.0% | 765 | 0.51 | 1 |
| 43 | 5295 | 100.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | -NE- | | |
| TOTAL | 40612 | 22.4% | 0.0% | 56.6% | 1.3% | 14.5% | 7.3% | 0.0% | 0.0% | | |

NOTE: -NE- = NO ENTRY FOR THIS TASK
 * EMPLOYEE CATEGORY DESIGNATIONS: A=PROFESSIONAL LIBRARIAN; B= OTHER PROFESSIONAL; C= LIBRARY ASSISTANT; D= CLERK;
 E= STUDENT/PAGE; F= OTHER; G= PAID BY OUTSIDE SOURCE; H= VOLUNTEER.

LIBRARY NO. 1
ILL ACTIVITY SHEET SUMMARY 111: COST PROFILE

| ACT NO. | TASK COST(S) BY EMPLOYEE CATEGORY* | | | DIRECT | | | ADMIN. # | | | TOTAL | | | |
|------------|---------------------------------------|------|--------|--------|-------|--------|----------|-----------------|-----------------|-----------------|-------------|-----------------|------|
| | A | B | C | E | F | G | H | UNIT COST*\$ | TASK COST*\$ | TASK COST*\$ | VOL- IME | UNIT COST*\$ | INC |
| 1 | 0.0 | 0.0 | 90.81 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 90.81 | 6.63 | 1438 | 0.06 | 0.07 |
| 2 | 37.80 | 0.0 | 56.80 | 0.0 | 5.71 | 0.0 | 0.0 | 0.0 | 100.31 | 5.96 | 142 | 0.71 | 0.75 |
| 3 | 0.0 | 0.0 | 23.96 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 23.96 | 1.63 | 268 | 0.09 | 0.10 |
| 4 | 0.0 | 0.0 | 28.12 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 28.12 | 1.91 | 248 | 0.11 | 0.12 |
| 5 | 0.0 | 0.0 | 76.14 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 76.14 | 5.18 | 284 | 0.27 | 0.29 |
| 6 | 0.0 | 0.0 | 41.21 | 0.0 | 44.08 | 0.0 | 0.0 | 0.0 | 85.30 | 9.78 | 670 | 0.13 | 0.14 |
| 7 | 0.0 | 0.0 | 10.27 | 0.0 | 13.42 | 0.0 | 0.0 | 0.0 | 23.68 | 2.82 | 336 | 0.07 | 0.08 |
| 8 | 0.0 | 0.0 | 10.71 | 0.0 | 0.19 | 0.0 | 0.0 | 0.0 | 10.90 | 0.76 | 239 | 0.05 | 0.05 |
| 9 | 0.0 | 0.0 | 8.48 | 0.0 | 39.09 | 16.80 | 0.0 | 0.0 | 64.37 | 8.15 | 4154 | 0.02 | 0.02 |
| 10 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 207.57 | 0.0 | 0.0 | 207.57 | 10.54 | 2386 | 0.09 | 0.09 |
| 11 | 0.0 | 0.0 | 29.65 | 0.0 | 34.27 | 0.0 | 0.0 | 0.0 | 63.92 | 7.44 | 581 | 0.11 | 0.12 |
| 12 | 0.0 | 0.0 | 17.41 | 11.99 | 12.65 | 3.81 | 0.0 | 0.0 | 45.86 | 4.85 | 315 | 0.15 | 0.16 |
| 13 | 0.0 | 0.0 | 17.86 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 17.86 | 1.21 | 150 | 0.12 | 0.13 |
| 14 | 0.0 | 0.0 | 10.71 | 2.34 | 0.0 | 0.0 | 0.0 | 0.0 | 13.06 | 1.00 | 110 | 0.12 | 0.13 |
| 15 | 0.0 | 0.0 | 9.82 | 0.0 | 0.0 | 6.80 | 0.0 | 0.0 | 16.62 | 1.16 | 298 | 0.06 | 0.06 |
| 16 | 0.0 | 0.0 | 198.23 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 198.23 | 16.10 | 1891 | 0.10 | 0.11 |
| 17 | -NE- | -NE- | -NE- | -NE- | -NE- | -NE- | -NE- | -NE- | -NE- | -NE- | -NE- | -NE- | -NE- |
| 18 | -NE- | -NE- | -NE- | -NE- | -NE- | -NE- | -NE- | -NE- | -NE- | -NE- | -NE- | -NE- | -NE- |
| 19 | 15.51 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 15.51 | 0.48 | -NE- | -NE- | -NE- | -NE- |
| 20 | 43.61 | 0.0 | 125.40 | 0.0 | 0.0 | 24.18 | 0.0 | 0.0 | 203.19 | 11.75 | 45? | 0.32 | 0.34 |
| 21 | 152.17 | 0.0 | 196.46 | 0.0 | 0.0 | 0.0 | 0.0 | 348.62 | 15.20 | 403 | 0.87 | 0.04 | 0.90 |
| 22 | 0.0 | 0.0 | 70.04 | 0.0 | 0.0 | 0.0 | 0.0 | 70.04 | 3.72 | 253 | 0.28 | 0.01 | 0.29 |
| 23 | 0.0 | 0.0 | 25.71 | 0.0 | 13.61 | 0.0 | 0.0 | 39.32 | 4.27 | 511 | 0.08 | 0.01 | 0.09 |
| 24 | 9.69 | 0.0 | 19.67 | 2.08 | 16.10 | 6.38 | 0.0 | 53.93 | 5.16 | 296 | 0.15 | 0.02 | 0.17 |

NOTE: -NE- * NO ENTRY FOR THIS TASK

* EMPLOYEE CATEGORY DESIGNATION: A-PROFESSIONAL LIBRARIAN; B- OTHER PROFESSIONAL; C- LIBRARY ASSISTANT; D- CLERK;

E- STUDENT/PAGE; F- OTHER; G- PAID BY OUTSIDE SOURCE; H- VOLUNTEER.

ADMINISTRATIVE COST DISTRIBUTED FROM ADMINISTRATIVE DEPARTMENT BUDGET

LIBRARY NO. 1
ILL 2 ACTIVITY SHEET SUMMARY III: COST PROFILE

| ACT NO. | A | B | C | TASK COSTS BY EMPLOYEE CATEGORY | | | | DIRECT TASK COST*\$ | ADMIN.# COST*\$ | TOTAL COST*\$ |
|--------------|----------------|------------|----------------|------------------------------------|---------------|---------------|------------|---------------------------|--------------------|------------------|
| | | | | D | E | F | G | | | |
| 25 | 0.0 | 0.0 | 101.53 | 0.0 | 0.0 | 0.0 | 101.53 | 7.23 | 692 | 0.15 |
| 26 | 0.0 | 0.0 | 70.24 | 0.0 | 0.0 | 0.0 | 70.24 | 4.39 | 291 | 0.24 |
| 27 | 0.0 | 0.0 | 23.35 | 0.0 | 0.0 | 0.0 | 23.35 | 1.24 | 82 | 0.28 |
| 28 | 0.0 | 0.0 | 15.79 | 0.0 | 0.0 | 51.44 | 67.23 | 3.69 | 110 | 0.14 |
| 29 | 1.94 | 0.0 | 13.59 | 0.0 | 0.0 | 0.0 | 15.53 | 1.18 | 32 | 0.49 |
| 30 | 0.0 | 0.0 | 9.92 | 0.0 | 0.0 | 0.0 | 9.92 | 0.82 | 32 | 0.31 |
| 31 | 81.61 | 0.0 | 29.75 | 0.0 | 0.0 | 0.0 | 111.16 | 4.99 | 388 | 0.27 |
| 32 | 0.0 | 0.0 | 0.0 | 10.16 | 9.05 | 4.14 | 0.0 | 23.35 | 2.91 | 128 |
| 33 | 0.0 | 0.0 | 14.69 | 0.0 | 0.0 | 0.0 | 14.69 | 1.21 | 704 | 0.12 |
| 34 | 314.02 | 0.0 | 320.59 | 0.0 | 2.30 | 6.51 | 0.0 | 643.42 | 31.82 | 533 |
| 35 | 26.17 | 0.0 | 106.71 | 0.0 | 8.82 | 6.75 | 0.0 | 148.45 | 9.72 | -NE- |
| 36 | 38.77 | 0.0 | 44.71 | 0.0 | 21.08 | 0.0 | 0.0 | 104.56 | 7.42 | 55 |
| 37 | 3.88 | 0.0 | 15.43 | 0.0 | 0.0 | 0.0 | 19.30 | 1.39 | 42 | 0.37 |
| 38 | 0.0 | 0.0 | 15.62 | 0.0 | 0.0 | 0.0 | 15.62 | 1.06 | 56 | 0.10 |
| 39 | 0.0 | 0.0 | 43.28 | 0.0 | 0.0 | 0.0 | 43.28 | 2.30 | 233 | 0.19 |
| 40 | 0.0 | 0.0 | 11.96 | 0.0 | 0.0 | 0.0 | 11.96 | 0.64 | 74 | 0.16 |
| 41 | 0.0 | 0.0 | 11.39 | 0.0 | 0.0 | 0.0 | 11.39 | 0.61 | 4 | 0.57 |
| 42 | 0.0 | 0.0 | 43.16 | 0.0 | 4.60 | 0.0 | 0.0 | 47.76 | 4.12 | 765 |
| 43 | 1026.39 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1026.39 | 32.06 | -NE- |
| TOTAL | 1751.36 | 0.0 | 1969.15 | 26.58 | 224.97 | 334.38 | 0.0 | 4306.43 | 244.67 | |

NOTE: -NE- = NO ENTRY FOR THIS TASK
 * EMPLOYEE CATEGORY DESIGNATIONS: A=PROFESSIONAL LIBRARIAN; B= OTHER PROFESSIONAL; C= LIBRARY ASSISTANT; D= CLERK;
 E= STUDENT/PAGE F= OTHER G= PAID BY OUTSIDE SOURCE H= VOLUNTEER.
 # ADMINISTRATIVE COST DISTRIBUTED FROM ADMINISTRATIVE DEPARTMENT BUDGET

LIBRARY NO. 1 ACTIVITY SHEET SUMMARY IV: PROFILE OF TOTAL TASK COST

| | | DIRECT | ADMIN. | TOTAL | | | | | | | | | | | |
|---------|--------------|----------------|----------------|--------------|------------|-------|------|-------|-------|-------|-------|------|------|------|------|
| ACT NO. | TASK COST \$ | DEPT. # BUDGET | ADMIN. COST \$ | TASK COST \$ | ADMIN. (2) | A | B | C | D | E | F | G | H | | |
| 1 | 90.81 | 6.63 | 21.03 | 118.48 | 23.38 | 0.0% | 0.0% | 76.7% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| 2 | 100.31 | 5.06 | 18.90 | 125.16 | 19.9% | 30.2% | 0.0% | 45.4% | 0.0% | 4.6% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| 3 | 23.96 | 1.63 | 5.19 | 30.78 | 22.2% | 0.0% | 0.0% | 77.8% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| 4 | 28.12 | 1.91 | 6.05 | 36.08 | 22.1% | 0.0% | 0.0% | 77.9% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| 5 | 76.14 | 5.18 | 16.42 | 97.74 | 22.1% | 0.0% | 0.0% | 77.9% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| 6 | 85.30 | 9.78 | 31.02 | 126.09 | 32.4% | 0.0% | 0.0% | 32.7% | 0.0% | 35.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| 7 | 23.68 | 2.82 | 4.93 | 35.43 | 33.2% | 0.0% | 0.0% | 29.0% | 0.0% | 37.9% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| 8 | 10.90 | 0.76 | 2.40 | 14.06 | 22.5% | 0.0% | 0.0% | 76.2% | 0.0% | 1.4% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| 9 | 64.37 | 8.15 | 25.85 | 98.34 | 34.6% | 0.0% | 0.0% | 86.6% | 0.0% | 39.7% | 17.1% | 0.0% | 0.0% | 0.0% | 0.0% |
| 10 | 207.57 | 10.54 | 33.44 | 251.55 | 17.5% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 62.5% | 0.0% | 0.0% | 0.0% | 0.0% |
| 11 | 63.92 | 7.44 | 23.60 | 94.97 | 32.7% | 0.0% | 0.0% | 31.2% | 0.0% | 36.1% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| 12 | 45.86 | 4.85 | 15.38 | 66.09 | 30.6% | 0.0% | 0.0% | 26.3% | 18.1% | 19.1% | 5.8% | 0.0% | 0.0% | 0.0% | 0.0% |
| 13 | 17.86 | 1.21 | 3.84 | 22.91 | 22.1% | 0.0% | 0.0% | 77.9% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| 14 | 13.06 | 1.00 | 3.17 | 17.23 | 24.2% | 0.0% | 0.0% | 62.2% | 13.6% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| 15 | 16.62 | 1.16 | 3.69 | 21.07 | 22.6% | 0.0% | 0.0% | 45.7% | 0.0% | 0.0% | 31.7% | 0.0% | 0.0% | 0.0% | 0.0% |
| 16 | 198.23 | 16.29 | 51.67 | 266.18 | 25.5% | 0.0% | 0.0% | 74.5% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| 17 | -NE- | -NE- | | | | | | | | | | | | | |
| 18 | 15.51 | 0.48 | 1.54 | 17.53 | 11.5% | 88.5% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| 20 | 203.19 | 11.75 | 37.28 | 252.22 | 19.4% | 17.3% | 0.0% | 53.7% | 0.0% | 0.0% | 9.6% | 0.0% | 0.0% | 0.0% | 0.0% |
| 21 | 348.62 | 15.20 | 48.21 | 412.03 | 15.4% | 36.9% | 0.0% | 47.7% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| 22 | 70.04 | 3.72 | 11.81 | 85.58 | 18.2% | 0.0% | 0.0% | 81.8% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| 23 | 39.32 | 4.27 | 13.54 | 57.13 | 31.2% | 0.0% | 0.0% | 45.0% | 0.0% | 23.8% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| 24 | 53.93 | 5.16 | 16.36 | 75.45 | 28.5% | 12.8% | 0.0% | 26.1% | 2.8% | 21.3% | 8.5% | 0.0% | 0.0% | 0.0% | 0.0% |

NOTE: -NE- = NO ENTRY FOR THIS TASK

* EMPLOYEE CATEGORY DESIGNATIONS: A=PROFESSIONAL LIBRARIAN; B= OTHER PROFESSIONAL; C= LIBRARY ASSISTANT; D= CLERK;

E= STUDENT/PAGE; F= OTHER; G= PAID BY OUTSIDE SOURCE; H= VOLUNTEER.

ADMINISTRATIVE COST DISTRIBUTED FROM ADMINISTRATIVE DEPARTMENT BUDGET

LIBRARY NO. 1 ACTIVITY SHEET SUMMARY IV: PROFILE OF TOTAL TASK COST

| ACT NO. | DIRECT COST* | ADMIN. DEPT. BUDGET | TOTAL TASK COST | | | PERCENT OF TOTAL TASK COST | | | EMPLOYEE CATEGORY | | | |
|--------------|----------------|---------------------|---|----------------|------------------|----------------------------|-------------|--------------|-------------------|-------------|-------------|-------------|
| | | | ADMIN. TASK COST* | DEPT. # | TOTAL TASK COST* | A | B | C | E | F | G | H |
| 25 | 101.53 | 7.23 | 22.95 | 131.71 | 22.9% | 0.0% | 0.0% | 77.1% | 0.0% | 0.0% | 0.0% | 0.0% |
| 26 | 70.24 | 4.39 | 13.92 | 88.55 | 20.7% | 0.0% | 0.0% | 79.3% | 0.0% | 0.0% | 0.0% | 0.0% |
| 27 | 23.35 | 1.24 | 3.94 | 28.53 | 18.2% | 0.0% | 0.0% | 81.8% | 0.0% | 0.0% | 0.0% | 0.0% |
| 28 | 67.23 | 3.69 | 11.72 | 82.64 | 18.6% | 0.0% | 0.0% | 19.1% | 0.0% | 6.2% | 0.0% | 0.0% |
| 29 | 15.53 | 1.18 | 3.75 | 20.45 | 24.1% | 9.5% | 0.0% | 66.4% | 0.0% | 0.0% | 0.0% | 0.0% |
| 30 | 9.92 | 0.82 | 2.59 | 13.33 | 25.6% | 0.0% | 0.0% | 74.4% | 0.0% | 0.0% | 0.0% | 0.0% |
| 31 | 111.16 | 4.99 | 15.85 | 132.00 | 15.8% | 61.7% | 0.0% | 22.5% | 0.0% | 0.0% | 0.0% | 0.0% |
| 32 | 23.35 | 2.91 | 9.24 | 35.50 | 34.2% | 0.0% | 0.0% | 28.6% | 25.5% | 11.7% | 0.0% | 0.0% |
| 33 | 14.69 | 1.21 | 3.84 | 19.74 | 25.6% | 0.0% | 0.0% | 74.4% | 0.0% | 0.0% | 0.0% | 0.0% |
| 34# | 643.42 | 31.82 | ## ADMINISTRATIVE TASKS. DISTRIBUTED IN ADMIN TASK COST. OVER ALL OTHER TASKS | | | | | | | | | |
| 35 | 148.45 | 9.72 | 30.83 | 188.99 | 21.5% | 13.8% | 0.0% | 56.5% | 0.0% | 4.7% | 3.6% | 0.0% |
| 36 | 104.56 | 7.42 | 23.53 | 135.51 | 22.8% | 28.6% | 0.0% | 33.0% | 0.0% | 15.6% | 0.0% | 0.0% |
| 37 | 19.30 | 1.39 | 4.42 | 25.11 | 23.1% | 15.4% | 0.0% | 61.4% | 0.0% | 0.0% | 0.0% | 0.0% |
| 38 | 15.62 | 1.06 | 3.36 | 20.04 | 22.1% | 0.0% | 0.0% | 77.9% | 0.0% | 0.0% | 0.0% | 0.0% |
| 39 | 43.28 | 2.30 | 7.30 | 52.88 | 18.2% | 0.0% | 0.0% | 81.8% | 0.0% | 0.0% | 0.0% | 0.0% |
| 40 | 11.96 | 0.64 | 2.02 | 14.61 | 18.2% | 0.0% | 0.0% | 81.8% | 0.0% | 0.0% | 0.0% | 0.0% |
| 41 | 11.39 | 0.61 | 1.92 | 13.91 | 18.2% | 0.0% | 0.0% | 81.8% | 0.0% | 0.0% | 0.0% | 0.0% |
| 42 | 47.76 | 4.12 | 13.06 | 64.93 | 26.5% | 0.0% | 0.0% | 66.5% | 0.0% | 7.1% | 0.0% | 0.0% |
| 43 | 1026.39 | 32.06 | 101.70 | 1160.15 | 11.5% | 88.5% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| TOTAL | 3663.01 | 212.85 | 675.24 | 4551.10 | 19.5% | 31.6% | 0.0% | 36.2% | 0.6% | 4.9% | 7.2% | 0.0% |

NOTE: -NE- = NO ENTRY FOR THIS TASK
 * EMPLOYEE CATEGORY DESIGNATIONS: A=PROFESSIONAL LIBRARIAN; B=OTHER PROFESSIONAL; C=LIBRARY ASSISTANT; D=CLERK;
 E=STUDENT/PAGE; F=OTHER; G=PAID BY OUTSIDE SOURCE; H=VOLUNTEER.
 # ADMINISTRATIVE COST DISTRIBUTED FROM ADMINISTRATIVE DEPARTMENT BUDGET

APPENDIX G
SAMPLE DECK SET UPS



SAMPLE DECK, SURVEY DATA, MULTIPLE STRATA

TESTS OF PESTS

WILSON, ELLIOTT, AND HANSON / 109

THEATRE LIBRARY
UNIVERSITY OF TORONTO LIBRARIES

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SAMPLE CALLING DECK, SURVEY DATA, SINGLE STRATUM

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SAMPLE DECK FOR THE USE OF THE CON SUBROUTINE

SAMPLE DECK FOR THE USE OF THE FACT SUBROUTINE

APPENDIX H
PROGRAM LISTING FOR THE FACT SUBROUTINE

FORTRAN IV 6 LEVEL 21

FACT DATE = 76317 13/07/42 PAGE 0001

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SUBROUTINE FACT(LBN,NEMP)
C THE PURPOSE OF THE SUBROUTINE FACT IS TO SUMMARIZE THE INPUT FROM
C THE ACTIVITY SHEETS, USING THE STAFF LISTS AND ASSOCIATED DATA
C FROM THE CASE STUDY FORM NUMBER 3 PRODUCING THE OUTPUT SUMMARY TABLES
C OF TIME AND COST FOR EACH LISTED TASK, AND UNIT TIME AND COST FOR
C THESE TASKS WHERE THE VOLUME DATA IS AVAILABLE.
C DIMENSION EMC5(150),FB(7),COST(50,A),PC(50),XLT(8),CLCS(8)
C DIMENSION INV(7,3),IUD(7,3)
C DIMENSION TCOST(50),ACT(50)
C REAL*8 ACT,LUE,EMID(50)
C INTEGER TBVL(7,3),FMOK(50),TIME(50),VOL(50),PT(50),TIME(50)
C FORMAT LIST. FORMAT STATEMENTS NUMBERED 8,11,16,43, AND 4R USE THE
C *T* FORMAT.
C 1 FORMAT(13.3X,13.1X,7I5)
C 2 FORMAT(13.3X,13.1X,4I5)
C 3 FORMAT(2I5)
C 4 FORMAT(24H1EMPLOYEE COST LIST FOR .15./.25H EMPID CLASS COST/HOU
LUR)
      5 FORMAT(1H ,A6,I5,F10.2)
      6 FORMAT(13.3X,I3,A6,15.110,FS,2,I3,12.15,5X,15)
      7 FORMAT(1A,2I5,I10,FS,5,0)
      8 FORMAT(1I1LIBRARY NO.15,'/1H ,A8 ,ACTIVITY SHEET SUMMARY I: TIME
1 PROFILE',/1H *130 (*-*),/1H *14 ,/1H *T31,1 TIME,MIN,*T00,*PERCENT OF TOTAL
2L GROUP TIME,/,4H ACT,T25,*EMPLOYEE,CATEGORY,*,T85,*EMPLOYEE,CAT
3EGORY*,/,4H NO.7X,*6X,*B,6X,*C,6X,*D,6X,*E,6X,*F,*6X,*G,
46X,*H TOTAL ,5X,*A,7X,*R,*7X,*C,*7X,*D,*7X,*E,*7X,*F,*7X,*G,*5
57X,*H*)
      9 FORMAT(1H0,13.2X,9I7,8(F7.1,*))
      10 FORMAT(1I1LIBRARY NO.15,'/1H ,A8 ,ACTIVITY SHEET SUMMARY III: COST
1T PROFILE',/1H *130(*-*),/1H *T25,*1 TASK COST($),B/T5,*DIRECT
2 ADMIN #,*1102,DIRECT,ADMIN #,TOTAL ,*,4H ACT,*123,EMPLOYEE
3 CATEGORY ,T75,2,TASK ,6X),VOL ,-,1X,3I2X,UNIT ,*3X)/4H NO.7X,
4,A ,7X,B ,7X,C ,7X,D ,7X,E ,7X,F ,7X,G ,7X,H ,6X,2,(COST,$,
5,*4X,*UME,11,3,(3A,*COST,$),*INC)
      11 FORMAT(6B10TOTAL,9I7,8(F7.1,*))
      12 FORMAT(3THONOFF,*,NE-,NO ENTRY FOR THIS TASK,/,1H ** EMPLOYEE
1CATEGORY DESIGNATIONS; A,PROFESSIONAL LIBRARIAN; B, OTHER PROFESSIONAL;
C, LIBRARY ASSISTANT; D, CLERK; *,/1H T21,*E, STUDENT/PAGE;
3 F, OTHER; G, PAID BY OUTSIDE SOURCE; H, VOLUNTEER,*)
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      13 FORMAT(1I1LIBRARY NO.15,'/1H ,A8 ,ACTIVITY SHEET SUMMARY II: TASK
1 TIME PROFILE',/1H *130(*-*),/1H *T45,*PERCENT OF TOTAL TASK TIME
2E ,*,4H ACT,6X,*TOTAL TASK ,T50,*EMPLOYEE,CATEGORY*,T89,*VOLUME
3 UNIT ,/,3 UNIT ,*,/3 UNIT ,*,/3 UNIT ,*,/3 UNIT ,*,/3 UNIT ,*,/3 UNIT ,
34H NO.7X,*TIME,MIN ,6X,A ,7X,*R ,7X,*E ,7X,*F ,7X,*G ,7X,*H ,7X,*I ,7X*
4,G ,7X,*H ,15X,*TIME,MIN ,INC )
      48 FORMAT(1I1LIBRARY NO.15,'/1H ,A8 ,ACTIVITY SHEET SUMMARY IV: PROF
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FORTRAN IV G LEVEL 21          FACT          DATE = 76317      13/07/42      PAGE 0002

1    FILE OF TOTAL TASK COSTS, *1H, *130(*,-*)/*1H, *10X,*DIRECT   ADMIN.
2    ADMIN.   TOTAL, *T70,*PERCENT OF TOTAL TASK COST, *4H ACT, *7X
3    TASK DEPT, #   TASK#* TASK   ADMIN, *T75,*EMPLOYEE CATEGO
4    RYR, *4H NO, *7X   COST, $   BUDGET   COST, $   COST, $(?) *6X
5    *A, *7X, *B, *7X, *C, *7X, *D, *7X, *E, *7X, *F, *7X, *G, *7X, *H)
6    69   FORMAT(1H,0,3,10X,*NE,-*)      91   FORMAT(1H, *# ADMINISTRATIVE COST DISTRIBUTED FROM ADMINISTRATIVE
7    FORMAT(1H, *NE,-*)      201   FORMAT(1H, *130(*,-*))      IND=0
8    GO TO 21
9    0027
10   ENTRY FACTI (LNIN,NOEMP)
11   IND=1
12   PREAD CARD ON PAID HOLIDAYS
13   READ(5,1)PG,LIR,(TBLV(J,1),J=1,7)
14   C   READ CARD ON SICK LEAVE. CHECK FOR INCREMENTAL SICK LEAVE PLAN AND READ
15   C   ADDITIONAL CARDS AS NECESSARY.
16   READ(5,1)PG,LIR,(TBLV(J,2),J=1,7)
17   DO 1P 1=1,7
18   IF (TRLV(1,2) * GE, 0) GO TO 18
19   READ(5,1)PG,LIR,((ININ(I,J),ISL(I,J)),J=1,3)
20   CONTINUE
21   C   READ CARD ON PAID VACATION. CHECK FOR INCREMENTAL VACATION PLAN
22   READ(5,1)PG,LIR,(TRLV(J,3),J=1,7)
23   C   READ CARD ON PAID VACATION. CHECK FOR INCREMENTAL VACATION PLAN
24   C   AND READ ADDITIONAL CARDS AS NECESSARY.
25   READ(5,1) PG,LIR,((INV(I,J),IVD(I,J)),J=1,3)
26   CONTINUE
27   I=1
28   0032
29   IF (TRLV(1,2) * GE, 0) GO TO 19
30   IF (TRLV(1,3) * GE, 0) GO TO 19
31   READ(5,1) PG,LIR,((INV(I,J),IVD(I,J)),J=1,3)
32   CONTINUE
33   0033
34   0034
35   0035
36   0036
37   0037
38   0038
39   0040
40   0041
41   0042
42   0043
43   0044
44   0045
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995  0996
996  0997
997  0998
998  0999
999  1000

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| FORTRAN IV (LEVEL 21) | FACT | DATE = 76317 | 13/07/42 |
|-------------------------|---|--------------|----------|
| 0059 | 99 IVD(I,J)=IVD(I,J)+IHOL+TBLV(I,2) | | |
| 0060 | I=I+1 | | |
| | GO TO 20 | | |
| 0061 | 95 TBLV(I,1)= -3 | | |
| 0062 | DO 101 J=1,3 | | |
| 0063 | 101 ISL(I,J)=ISL(I,J)+IHOL+TBLV(I,3) | | |
| 0064 | I=I+1 | | |
| 0065 | GO TO 20 | | |
| 0066 | 26 READ(5,17)IPG,LIH,(FB(I),I=1,7) | | |
| 0067 | C READ CARD ON FRINGE BENEFIT RATE. IN INTEGER FORM. SO COMPUTE TO GET C SALARY/WAGE ADD ON | | |
| 0068 | DO 23 I=1,7 | | |
| 0069 | 23 FB(I)=FB(I)/100. C READ CARD ON SALARIAL, COMPUTE NUMBER OF DAYS ACCRUED ANNUALLY READ(5,2) IPG,LIH,NOY,KSAB,TSAB,NSAB | | |
| 0070 | SAF=0. | | |
| 0071 | TF (NOY.EQ.2) GO TO 47 | | |
| 0072 | SAF=(MSAP*176./TSAB | | |
| 0073 | CONTINUE | | |
| 0074 | 47 C FINISH TO WITH TABLE GENERATION NOW RD EMP ID. COMP HOURLY COST EACH | | |
| 0075 | ENTRY FACT2(LBRI,NOEMP) | | |
| 0076 | LBD=LBN | | |
| 0077 | WRITE (6,4) LBD | | |
| 0078 | DO 30 N=1,NOEMP | | |
| 0079 | READ(5,6) IPG,LIB,IDE,KL,ISAL,WGS,IDLH,IRHS,NTRS,NOM | | |
| 0080 | EMD(N)=1DE | | |
| 0081 | EMK(N)=KL | | |
| 0082 | TF (ISAL.LT..0) GO TO 38 | | |
| 0083 | DN=0. | | |
| 0084 | IF (KL,NE,KSAB) GO TO 32 | | |
| 0085 | DN=KSAB | | |
| 0086 | 32 DZOF=BLV(KL,1) | | |
| 0087 | IF (DZOF.LT.0) GO TO 40 | | |
| 0088 | 33 FP=1. | | |
| 0089 | TF (NOMALLT..0) GO TO 35 | | |
| 0090 | FR=NOMAL2. | | |
| 0091 | 35 FP=FR*IRHS/40. | | |
| 0092 | DN=(2080.-DZOF)*R-(UN)*FR | | |
| 0093 | 34 CNUM=ISAL*(1.+FR(KL)) | | |
| 0094 | FMOST(N)=CNUM/DN | | |
| 0095 | 36 WPIE(6,5) EMID(N)*EMNK(N)*EMCST(N) | | |
| 0096 | 60 TO 30 | | |
| 0097 | 38 EMCST(N)=WGS*(1.+FR(KL)) | | |
| 0098 | 60 TO 36 | | |
| 0099 | C FTNISHED EMPLOYEE COST LIST | | |
| 0100 | 40 INT=1 | | |
| 0101 | IV=1 | | |
| | DZOF=0 | | |

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0102      IF (ITBLV(KL,1)+5) 27,27,25
0103      IF (INYS.LE.INVL(KL,IV)) GO TO 29
0104      IF (IV.GE.3) GO TO 29
0105      LV=IV+1
0106      GO TO 27
0107      DZOF=IV0(KL,IV)
0108      IF (ITBLV(KL,1)+5) 25,33,25
0109      IF (INYS.LE.INVL(KL,INT)) GO TO 31
0110      IF (INT.GE.3) GO TO 31
0111      INT=INT+1
0112      GO TO 25
0113      DZOF=ISL(KL,INT)+DZOF
0114      GO TO 33
0115      CONTINUE
0116      IF (IND.GT..5) RETURN
0117      IND=0
0118      C FINISHED EMPLOYEE COST LIST, NOW TIME COST TABLE
0119      ENTRY FACTS (LRN,NOEMP)
0120      LBID=LEN
0121      READ(5,7)ACT,NACT,ADM,FTE
0122      C READS DEPARTMENT UP TO 8 ALPHA CHARACTERS, THEN NUMBER OF LISTED ACTIVITIES
0123      C THEN THE NUMBER OF THE ADMINISTRATIVE TASK, THEN THE
0124      C LIBRARY ADMINISTRATIVE BUDGET AND TOTAL FTE FOR INCLUSION ON ADM OVERHEAD
0125      IF (NACT.GT.50) STOP
0126      C ADMINISTRATIVE DEPARTMENT OVERHEAD ADD ON PER MINUTE
0127      IF (FTE.LT..01) ADMCT=(ADM/FTE)/50.
0128      IF (FTE.GT..01) ADMCT=(ADM/FTE)/50.
0129      C PRF ZERO TIME AND COST MATRICES
0130      DO 57 I=1,NACT
0131      PT(I)=0
0132      PC(I)=0
0133      VOL(I)=0
0134      DO 53 J=1,8
0135      COST(I,J)=0
0136      COST(I,J)=0.
0137      CONTINUE
0138      C READ TASK CARDS SUMMING TIME AND COST INTO MATRIX ACCORDING TO TASK
0139      C NUMBER AND EMPLOYEE CLASSIFICATION*
0140      C READ(5,52) I,LH,IN,FACT,ITIME,IVOL
0141      C FORMATTED SKIPI3,AB,JS
0142      C FINISHED IF TASK NUMBER EQUALS ZERO.
0143      C IF FACT.LT..01) GO TO 100
0144      N=1
0145      IF (EMIO(N).EQ.0) GO TO 56
0146      C STOP IF UNABLE TO MATCH EMPLOYEE IDENTIFICATION.
0147      IF (N.GT.NOEMP) STOP 55
0148      N=N+1
0149      GO TO 54
  
```



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      WRITE (6*16)
      C           SUMMARY FORM 2
      WRITE(6*3) LB1D,ACT
      WRITE(6*20)
      DO 41 I=1,NACT
      DO 42 J=1,8
      PTTM(J)=0
      IF(I-25) 63,45,63
      45 CONTINUE
      WRITE(6*16)
      WRITE(6*3) LBID,ACT
      WRITE(6*20)
      INC=0
      63 CONTINUE
      UNTM(1)=0.
      IF((TTM(1),GT,.01)) GO TO 64
      WRITE(6*9) 1
      GO TO 41
      64 CONTINUE
      RTM=100.*TTME(1)
      DO 58 J=1,8
      PTTM(J)=TIME(1,J)*RTM
      IF(VOL(1,L1,L1,01)) GO TO 65
      IF(P(1,1).NE.0) INC =1
      TTM=TIME(1)-T(1)
      UNTM(1)=TTV/VOL(1)
      WRITE(6,64) 1.*TIME(1),*PTTM(1),*PTTM(J)*J=1,8)*VOL(1)*UNTM(1)*INC
      FORMAT(1H0*.13,3X*110,3X*B(F7.1,*9*)*110*F10.2*15)
      GO TO 41
      65 CONTINUE
      WRITE(6,10) 1.*TIME(1),(PTTM(J),J=1,8)
      10 FORMAT(1H0*.13,3X*110,3X*B(F7.1,*9*)*110*F10.2*15)
      *NE-*
      41 CONTINUE
      CLMT=KLTT
      DO 66 J=1,8
      PTTM(J)=(KLTM(J)/CLMT)*100.
      221 CONTINUE
      WRITE(6*5) KLTT*(PTTM(J),J=1,8)
      46 FORMAT(GHOTOTAL .3X*1B.*3X*B(F7.1,*9*))
      WRITE(6*16)
      SUMMARY FORM 3
      WRITE(6*11) LB1D, ACT
      WRITE(6*20)
      ADC=0.
      TTSK=0.
      0228 DO A1 J=1,8
      0229   CLCS(J)=0.
      0230   CLCT=0.

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| | | |
|--|-----------------------|--------------|
| FORTRAN IV G LEVEL 21 | FACT | DATE = 76317 |
| <pre> 0232 DO 80 I=1,NACT 0233 UADC=0. 0234 INC=0 0235 ACTAC(I)=0. 0236 TSKCS=0. 0237 UNCSI=0. 0238 TCOST(I)=0 0239 UNITOT=0. 0240 IF (I-25)*H7.8E+87 0241 AS WRITE (0,16) 0242 WRITE (6,91) 0243 WRITE (6,41) LRID,ACT 0244 WRITE (6,201) 0245 CONTINUE 0246 DO 82 J=1,8 0247 TCNST(I)=TCOST(I)+COST(I,J) 0248 CLCS(J)=CLCS(J)+COST(I,J) 0249 IF ((COST(I),LT.,0.0)) GO TO 84 0250 CLCT=CLCT+TCOST(I) 0251 IF (VOL(I),LT.,0.0)) GO TO 85 0252 IF (PC(I),NE.,0.)INC=1 0253 TCC=TCOST(I)-PC(I) 0254 UNCST = TCC/VOL(I) 0255 UADC=UNIM(I)*ADMCST 0256 UNITOT=UNCST*UADC 0257 ACTAC(I)=TIME(I)*ADMCST 0258 ADC=ADC*ACTAC(I) 0259 TSKCS=ACTAC(I)+TCOST(I) 0260 TTSK=TSK+TSKCS 0261 IF ((TSKCS,GT.,0.0)) GO TO 83 0262 WRITE(6,69) 0263 GO TO 86 0264 WRITE (6,12) I*(COST(I,J)*J=1,8)*TCOST(I)*ACTAC(I)*VOL(I) 0265 12 FORMAT(I=0,13*2X,8F8.2*2F10.2*17.3E9*2*15) 0266 GO TO 80 0267 AS CONTINUE 0268 ACTAC(I)=TIME(I)*ADMCST 0269 ADC=ADC*ACTAC(I) 0270 TSKCS=ACTAC(I)+TCOST(I) 0271 TTSK=TSK+TSKCS 0272 WRITE (6,13) I*(COST(I,J)*J=1,8)*TCOST(I)*ACTAC(I) 0273 13 FORMAT(I=0,13*2X,8F8.2*2F10.2*, -NE-) 0274 BN CONTINUE 0275 WRITE (6,15) (CLCS(J),J=1,8)*CLCT+ADC 0276 15 FORMAT(6H+TOTAL*8FH,2*2F10.2) 0277 WRITE (0,16) 0278 WRITE (6,91) </pre> | <pre> 13/07/42 </pre> | |

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C SUMMARY FORM 4
        WRITE(6,48) LR1D,ACT
        WRITE(6,201)
        ANTRK=0
        IF (IAD.LT.*0.) GO TO 90
        DN=LTT-TIME(IAD)
        IF (DN.*LT.*0.) STOP
        ADTSK=(TCOST(IAD)*ACTAC(IAD))/DN
        CONTINUE
        DO 49 I=1*NACT
        DO 50 J=1*BACT
        PTTM(J)=0
        ADCST=0
        TOTAL=0
        ADDC=0
        IF (I-25) 74,70,79
        70 CONTINUE
        WRITE(6,16)
        WRITE(6,21)
        WRITE(6,48) LR1D,ACT
        WRITE(6,201)
        CONTINUE
        IF (I.NE.IAD) GO TO 71
        WRITE(6,72) I,TCOST(I)*ACTAC(I)
        71 FORMAT(1H0,1I*,1H0,1I*,2E10.2*) * ADMINISTRATIVE TASKS, DISTRIBUTED I
        IN * ADMIN TASK COST*, OVER ALL OTHER TASKS*
        72 FORMAT(1H0,1I*,1H0,1I*,2E10.2*) * ADMINISTRATIVE TASKS, DISTRIBUTED I
        0303 GO TO 49
        0304 CONTINUE
        0305 IF (TIME(I).GT.*0.) GO TO 73
        0306 CONTINUE
        0307 WRITE(6,74) 1
        0308 FORMAT(1H0,13,10X,*-NE--*)
        0309 GO TO 49
        0310 CONTINUE
        0311 ADCST=TIME(1)*ADTSK
        TOTAL=TCOST(I)*ACTAC(I)*ADCST
        0312 IF (TOTAL.LT.*0.) GO TO 78
        0313 ADCST=(ACTAC(I)*ADCST)*10*/TOTAL
        0314 DO 76 J=1,B
        0315 ADCST=TCOST(I,J)*100*/TOTAL
        0316 PTTM(J)=ADCST
        0317 CONTINUE
        0318 WRITE(6,77) I,TCOST(I)*ACTAC(I)*ADCST, (PTTM(J),J=1,B)
        0319 FORMAT(1H0,13,2*X,4F10.2*(F7.1,*4))
        0320 CONTINUE
        0321 ADCST=0
        0322 TOTAL=CLCT
        0323 IF (IAD.GT.*0.) GO TO 92
        0324 ADCST=0
        0325 J=1,B
    
```

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FORTRAN IV G LEVEL 21          FACT
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0.325   97 PTTM(J)=CLCS(J)*100./TOTAL
0.326   GO TO 96
0.327   CONTINUE
0.328   TOTAL=CLCT*ADC
0.329   CLCT=CLCT-TCOST(IAD)
0.330   ADC=ADC-ACTAC(IAD)
0.331   ADCST=TCOST(IAD)+ACTAC(IAD)
0.332   DO 89 J=1,8
0.333   PTTM(J)=(CLCS(J)- COST(IAD,J))*100./TOTAL
0.334   CONTINUE
0.335   ADPRC=(ADCST*ADC)*100./TOTAL
0.336   0.337   FORMAT(6H0TOTAL *4F10.2*9(F7.1,*9*))
0.338   WRITE(5,16)
0.339   WRITE(5,31)
0.340   RETURN
0.341   END

```


APPENDIX I
THE CON SUBROUTINE PROGRAM LISTING AND SAMPLE OUTPUT


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FORTRAN IV G LEVEL 21           CON          DATE = 76317    13/07/42      PAGE 0001

0001      C   SUBROUTINE CON(LIB,NOEMP)
0001      C   THE PURPOSE OF THE CON SUBROUTINE IS TO SUMMARIZE CASE STUDY STAFF
0001      C   LISTS FOR ACQUISITIONS, CATALOGING, SERIALS, AND INTERLIBRARY LOAN
0001      C   DEPARTMENTS (PAGE 7 THROUGH 10) FOR INCLUSION WITH THE SURVEY DATA.
0001      REAL*8 EID
0002      DIMENSION FTE(4,8),SAL(4,8)
0003
0004      INTEGER F
0004      1  FORMAT(11.12,3X,13.4,6,15,F10.0,F5.0,1X, F2.0)
0005      1  FORMAT(9A0,LINE NO. 15,4(F10.2,10X),I100,*CARD NO.*15)
0006      7  FORMAT(I1H,T02,*LIBRARY NUMBER*,I5,*1H0,T20,*DEPARTMENT FTE TABLE
0007      9  FORMAT(I1H,T02,*1HOT16,ACQUISITIONS*,I37,*CATALOGING*,T59,*SERIAL
0008      1 25,*T74,*INTERLIBRARY LOAN*,/IH T19,*31-40,I,T19,*41-50,I,T59,
0009      3*(51-60)*,T79,*61-70)*)
0010      000H
0011      0009
0011      0010      FTE(I,J)=0
0011      2  SAL(I,J)=0
0011      2  READ(CARDS AND ACCUMULATE FTE AND SALARY ACCORDING TO DEPARTMENT
0011      C   (PAGE NUMBER) AND EMPLOYEE CLASSIFICATION ( 1 THROUGH 8).
0012      0012      00 3 J=1:NOEMP
0013      0013      READ(5,1) F*P,LIB,EID,IT,AS,WG,HW
0014      0014      IF(IP.EQ.0) GO TO 3
0015      0015      I=IP-6
0016      0016      FW=40.
0017      0017      FTE(HW/FW
0018      0018      FTE(I,IT)=FTE(I,IT)+ FR
0019      0019      IF((AS,LT.,0.01) GO TO 4
0020      0020      SAL(I,IT)=SAL(I,IT)+FR*AS
0021      0021      GO TO 3
0022      0022      SAL(I,IT)=SAL(I,IT)+WG* 2089.*FR
0023      0023      4  CONTINUE
0024      0024      WRITE(6,9) LIB
0025      0025      DO 6 J=1,B
0026      0026      KNO=+12
0027      0027      WRITE(6,7) J,(FTE(I,J),I=1,4),KNO
0028      0028      6  CONTINUE
0029      0029      WRITE(6,10)
0030      0030      10  FORMAT(1H0,T20,*DEPARTMENT SALARY TABLE*)
0031      0031      DO 8 J=1,6
0032      0032      KLN=J-8
0033      0033      KNO=+20
0034      0034      WRITE(6,7) KLN,(SAL(I,J),I=1,4),KNO
0035      0035      8  CONTINUE
0036      0036      RETURN
0037      END

```

LIBRARY NUMBER 301

DEPARTMENT FTE TABLE

DEPARTMENTAL FTE TABLE
ACQUISITION (31-40)CATALOGING
(41-50)INTERLIBRARY LOAN
(61-70)

| LINE NO | 1 | 0.0 | 0.88 | 0.0 | 1.00 | CARD NO 13 |
|---------|---|------|------|------|------|------------|
| LINE NO | 2 | 0.0 | 0.0 | 0.0 | 0.0 | CARD NO 14 |
| LINE NO | 3 | 0.38 | 0.0 | 0.0 | 1.00 | CARD NO 15 |
| LINE NO | 4 | 1.15 | 2.97 | 0.35 | 1.42 | CARD NO 16 |
| LINE NO | 5 | 0.0 | 0.38 | 0.0 | 0.25 | CARD NO 17 |
| LINE NO | 6 | 0.0 | 0.45 | 0.0 | 0.0 | CARD NO 18 |
| LINE NO | 7 | 0.0 | 0.0 | 0.0 | 0.0 | CARD NO 19 |
| LINE NO | 8 | 0.0 | 0.0 | 0.0 | 0.0 | CARD NO 20 |

DEPARTMENT SALARY TABLE

| LINE NO | 9 | 0.0 | 10783.50 | 0.0 | 12900.00 | CARD NO 21 |
|---------|----|---------|----------|---------|----------|------------|
| LINE NO | 10 | 0.0 | 0.0 | 0.0 | 0.0 | CARD NO 22 |
| LINE NO | 11 | 3991.50 | 0.0 | 0.0 | 7464.00 | CARD NO 23 |
| LINE NO | 12 | 8354.00 | 17650.59 | 2006.00 | 7311.71 | CARD NO 24 |
| LINE NO | 13 | 0.0 | 1911.00 | 0.0 | 1274.00 | CARD NO 25 |
| LINE NO | 14 | 0.0 | 1029.60 | 0.0 | 0.0 | CARD NO 26 |

4721207000045100:
2C:1176:WICHE:2B133

